

Contemporary Psychology

A JOURNAL OF REVIEWS

January 1961

VOLUME VI • NUMBER 1

- | | | |
|------|----|--|
| Page | 1 | Metamorphosis: On the Development of Affect, Perception, Attention, and Memory , by E. G. Schachtel
<i>Reviewed by</i> MARTIN SCHEERER |
| | 4 | Contemporary Theories and Systems in Psychology , by B. B. Wolman
<i>Reviewed by</i> NICHOLAS PASTORE |
| | 5 | Mechanisation of Thought Processes , by National Physical Laboratory
<i>Reviewed by</i> B. F. GREEN, JR. |
| | 7 | Culture and Mental Health: Cross-Cultural Studies , by M. K. Opler (Ed.)
<i>Reviewed by</i> F. L. K. HSU |
| | 9 | The Motivation to Work , by Frederick Herzberg, Bernard Mausner, and Barbara B. Snyderman
<i>Reviewed by</i> R. L. KAHN |
| | 10 | Psychoanalysis and American Literary Criticism , by Louis Fraiberg
<i>Reviewed by</i> O. B. HARDISON, JR. |
| | 11 | The Disturbed Child: Recognition and Psychoeducational Therapy in the Classroom , by Pearl H. Berkowitz and Esther P. Rothman
<i>Reviewed by</i> LEON GORLOW |

(Continued on inside cover)

Published by THE AMERICAN PSYCHOLOGICAL ASSOCIATION

Edwin G. Boring, Editor
Harvard University

EDITH L. ANNIN, Assistant to the Editor
A. A. LUMSDAINE, Instructional Media
University of California, Los Angeles

Editorial Consultants

FRANK A. BEACH, *University of California*
PETER A. BERTOCCHI, *Boston University*
JUDSON S. BROWN, *University of Florida*
ROGER W. BROWN, *Massachusetts Institute of Technology*
JOSEF BROŽEK, *Lehigh University*
JACK W. DUNLAP, *Stamford, Conn.*
RICHARD M. ELLIOTT, *University of Minnesota*
FRANK A. GELDARD, *University of Virginia*
DANIEL KATZ, *University of Michigan*
DONALD W. MACKINNON, *University of California*
MELVIN H. MARX, *University of Missouri*
DOUGLAS MCGREGOR, *Massachusetts Institute of Technology*
WILBERT J. MCKEACHIE, *University of Michigan*
QUINN MCNEMAR, *Stanford University*
NORMAN L. MUNN, *Bowdoin College*
W. D. NEFF, *University of Chicago*
CHARLES E. OSGOOD, *University of Illinois*
VICTOR RAIMY, *University of Colorado*
ANN ROE, *Harvard University*
FILLMORE H. SANFORD, *University of Texas*
NEVITT SANFORD, *University of California*
ROBERT R. SEARS, *Stanford University*
HAROLD SEASHORE, *New York, N. Y.*
S. SMITH STEVENS, *Harvard University*
DONALD E. SUPER, *Teachers College, Columbia University*
GEORGE G. THOMPSON, *The Ohio State University*
BENTON J. UNDERWOOD, *Northwestern University*
S. RAINS WALLACE, JR., *Hartford, Conn.*
ROBERT I. WATSON, *Northwestern University*
ROBERT W. WHITE, *Harvard University*
ROBERT B. ZAJONC, *University of Michigan*

CONTENTS—continued

- 12 **Voprosy Psikhoterapii** [Questions of Psychotherapy], by M. S. Lebedinskii (Ed.)
Reviewed by M. G. FIELD
- 13 **Psychological Appraisal of Children with Cerebral Defects**, by Edith M. Taylor
Reviewed by A. O. ROSS
- 15 **CP SPEAKS**
By the EDITOR
- 16 **General Psychotherapy: An Outline and Study Guide**, by J. G. Watkins
Reviewed by S. L. GARFIELD
- 18 **Rigidity of Behavior: A Variational Approach to the Effect of Einstellung**, by A. S. Luchins and Edith H. Luchins
Reviewed by W. E. VINACKE
- 20 **Speech and the Development of Mental Processes in the Child**, by A. R. Luria and F. Ia. Yudovich
Reviewed by SUSAN M. ERVIN
- 22 **Assessment of Human Motives**, by Gardner Lindzey (Ed.)
Reviewed by N. T. FEATHER
- 23 **Konstitution und Entwicklung**, by Wilfried Zeller
Reviewed by MARIA D. SIMON
- 25 **INSTRUCTIONAL MEDIA**
Edited by A. A. LUMSDAINE
Crowder's **The Arithmetic of Computers**, reviewed by L. D. EIGEN
Harlow's **Nature and Development of Affection** (film), reviewed by F. A. BEACH
- 28 **ON THE OTHER HAND**
- 31 **List of Books Received**

Books for review, review manuscripts, letters for publication, and correspondence concerning editorial matters should be sent to the Editor, Edwin G. Boring, Memorial Hall, Harvard University, Cambridge 38, Mass.

Films and other instructional materials for review and correspondence concerning instructional media should be sent to A. A. Lumsdaine, School of Education, University of California, 405 Hilgard Avenue, Los Angeles 24, Calif.

ARTHUR C. HOFFMAN, Managing Editor; HELEN ORR, Promotion Manager

Communications concerning subscriptions, change of address, claims for the nonreceipt of a number, advertising, and other business matters should be sent to the American Psychological Association, Inc., 1333 Sixteenth Street, N.W., Washington 6, D. C. Address changes must reach the Subscription Office by the 10th of the month to take effect the following month.

Contemporary Psychology: A Journal of Reviews is published monthly. The yearly volume comprises approximately 384 pages. The subscription per year is \$10.00, foreign \$10.50, single number \$1.00.

Published by the American Psychological Association at Prince and Lemon Sts., Lancaster, Pa. and 1333 Sixteenth St., N.W., Washington 6, D. C.

Second-class postage paid at Lancaster, Pa., and at additional mailing offices.

© 1961 by the American Psychological Association, Inc.

Contemporary Psychology

A JOURNAL OF REVIEWS

VOLUME VI

January 1961

NUMBER 1

Beyond Pleasure—on Principle

Ernest G. Schachtel

Metamorphosis: On the Development of Affect, Perception, Attention, and Memory. New York: Basic Books, 1959. Pp. viii + 344. \$6.00.

Reviewed by MARTIN SCHEERER

Dr. Schachtel, the author, has an LLD from Heidelberg, was at one time associated with the criminological research of the Gluecks at the Harvard Law School, and is now a member of the faculty of the William Alanson White Institute in New York City. Dr. Scheerer, the reviewer, has been for the past twelve years Professor of Psychology at the University of Kansas. He refers with pride to his former associations with William Stern, Heinz Werner, and Kurt Goldstein, which, with his first book on Gestalt psychology, got him interested in cognitive processes in relation to personality. He likes to think of himself as a general psychologist and not merely a clinical one.

THIS is a theoretical book. It consists of three sections, each exploring different aspects of human growth.

First, Schachtel re-examines Freudian concepts of motivation and of affect, i.e., emotions, especially their genetic implications. He introduces novel developmental data and original propositions which modify radically orthodox psychoanalytic constructs. This section is based on an unpublished address at the Freud Centenary Symposium at Brandeis University.

The second and largest portion predi-

cates two basic attitudes or modes of human perception: a subject-centered mode ("autocentric") and an object-centered mode ("allocentric"). Their interplay is traced ontogenetically, along with phylogenetic comparisons. Schachtel elaborates on the role which these two perceptual attitudes play in shaping man's relationship to the world at various stages of his growth. He tries to show how the two perceptual modes, together with their respective feeling tones, form new stages of cognitive-emotional functioning. In passing through such 'levels' the organism transforms itself. It modifies its cognitive-emotional organization and also its contact with the environment. Thus, *metamorphosis* signifies a transformation from birth to maturity which Schachtel considers peculiar to man—a transformation which spans both discontinuity and continuity of development. Herein his position is close to Erich Fromm's, certain existentialists', and also G. W. Allport's, who all emphasize *becoming*. This way of thinking is epitomized when Schachtel cites Plutarch: "The child must die so that the youth may arise and the youth must die for the man to be born."

The last section of the book further illustrates this ontogenetic scheme by

including two pertinent earlier publications. The first is *The Development of Focal Attention and the Emergence of Reality*; the second, *On Memory and Childhood Amnesia*, depicts the metamorphosis of the character of experience, memory, and thinking from the pre-verbal and pre-cultural state of infancy to verbal and conventional adulthood. The book's index is a labor of love, over twenty pages long.

The idea of a metamorphic development is not entirely new. Piaget, Werner, Baldwin, and others have advanced the idea for cognitive functions, i.e. emergence of qualitatively distinct phases versus continuous quantitative increase. Schachtel's treatise differs, however, in several respects. First, motivation is a more central theme. Secondly, experiments are not a chief source of evidence. Instead Schachtel advocates two approaches. One is phenomenological, understood as the precise and subtle description of experiential data. The other is ontogenetic; it has to supplement the first by the empirical exploration of how these experiences develop.

Schachtel's training and interests invite such a two-pronged approach. With a background in European University culture, he worked and lectured on clinical psychology in the USA. A Fellow of the American Psychological Association, and of the W. A. White Institute, he is a frequent contributor to *Psychiatry*, and also a practicing psychoanalyst. The combination of genetic and phenomenological points of view gives his book a unique and arresting quality. To this Schachtel adds his unusual skill in translating phenomono-

logical ways of thinking from their European cast into 'Americanese.' (Such terms as *encounter* are made intelligible and even palatable.) The book no less attests to its author's up-to-date contact with technical research in both continents. Thus Schachtel exposes his reader to two climates of psychology, the European and the American, as they have prevailed for the past fifty years. The motion and commotion of that *Zeitgeist* register in the book's exposition from Freud to Heidegger and Sartre, and from Dewey to Hebb, Harlow and R. W. White.

The work has an impressive ideological ancestry. Schachtel refers especially to the influences of Binswanger, Fromm, Kurt Goldstein, von Gelbsattel, A. Portmann, Erwin Straus, Sullivan, and Thure von Uexküll. Also noticeable are Buytendijk, William Stern, V. von Weizsäcker, and Heinz Werner. Conspicuous by their absence are Angyal, Nuttin, Plessner, and Carl Rogers. One wonders why they have been omitted from the company of holists and phenomenologists that Schachtel keeps.

WHAT is the book's unique contribution? As a critical essay, it unites many facets of a growing skepticism concerning the Freudian portrayal of human nature and growth. On the creative side, it discloses important but neglected dimensions of experience and motivation. The old and new issues that Schachtel raises with Freud's analysis are these.

(1) The pleasure principle is "negative"—the cessation of unpleasure. It neither reflects the positive content of emotions nor their coextensiveness with all action. Affects are treated as "safety valves for discharge of excess drive tension"; thus they have only signal function. With this, Schachtel contrasts the genuine quality of enjoyment, as in consummatory activity, self-actualization, exploratory contact, and play. To exemplify his argument: "Indeed we would experience it as torture if we were condemned to do nothing all day long but rest with all our appetites—sexual, for food, etc.—sated at the slightest desire and with no physical or mental activity (i.e. heightened tension and stimulation) permitted" (p. 57). Or this from Lorenz: "My aim in having lunch is the

pleasure I derive from eating, and definitely not the . . . consequence of my eating activity—which is only to make me still fatter" (p. 123). Or this: "Does the child learn to walk in order to please his parents or to stand up and walk?" (p. 27).

(2) Freudian theory leads to genetic reductionism. In it adult emotions are really replicas of primeval, traumatic experiences. Creative experience derives from "regression in the service of the Ego" and from "loose repression" of infantile impulses. Thinking is equated with delay of primary wish fulfillment and the detour path required by reality which leads to the satisfying object. In contrast, Schachtel holds that "thought has two ancestors rather than one—namely, motivating needs and . . . the relative autonomous capacity for object interest" (p. 268). He challenges psychoanalytic reductionism with this resumé. "Freud's position shows a profound disbelief in the phenomenon of change and development, although, paradoxically, he is at the same time a man who in psychoanalytic therapy devised the most powerful tool for psychic development and change" (p. 62). Schachtel's debate leaves the impression that Freud deposited the wrong child in the adult psyche, because, to begin with, his conception of the child was "adultomorph." "While the child's activity may, from the adult's point of view, have destructive effects, this is not sufficient reason to assume that it arises from destructive motivation or from the aggressive drive" (p. 134). All this, and more, suggests that either Freud had no real developmental psychology or that he had a wrong one.

A COMPARISON with Rapaport's latest statement on *Psychoanalysis as Developmental Psychology* (1960) reveals that the process and change in growing up are here quite differently conceived, yet under the same label of development. Rapaport now 'reads' Freud as having always posited intrinsic maturation and having both primary and secondary process thought emerge with birth; but the latter process grows predominant through progressive neutralization of drive-cathexes and their interaction with restraining reality experi-

ence. Not so for Schachtel who neither constructs developmental change 'from below' (drives and their cathexes), nor holds the 'negative' view of reality as taming that well-known shrew, the Id. He takes a fresh look at developmental phenomena and, in doing so, marshals considerable empirical material. The work of Lorenz, Tinbergen, Harlow, Butler, and Walkers on animals is used, as are the novel experimental studies of Stirnimann on the newborn child, and observations during the first year of life by Gesell, Piaget, Escalona, and Lois B. Murphy. Schachtel calls upon the foregoing array to substantiate his claim that there exists an intrinsic organismic tendency to engage in sensory exploration, and object manipulation, *without* extrinsic motives. Real enjoyment is based on "encounter with stimulation rather than on its abolishment."

Expanding this conception, Schachtel presents a 'metamorphic genealogy' of emotion and cognition coupled with phenomenology. From birth on, the prototypes of two emotions are distinguishable. One is an "embeddedness affect," biologically preformed in the sheltering envelope of prenatal environment. With the shift to the mother's postnatal care, the infant lives in a state of psychological and social embeddedness. When stimulation disturbs that state, it leads to the affect of helpless distress, and, when that state is restored, relief follows. Herein the affect fits Freud's need-tension-discharge model. The other emotion is the "activity affect," biologically preformed, in consummatory behavior. In this affect new stimulation is welcomed and stimulus contact actively sought. From the time the neonate enters a new "separate form of existence," this affect sustains heightened tension and intensifies interaction with objects (also coping with internal needs). It has a positive feeling tone such as "zest for living" or "joie de vivre."

Thus conceived, maturation moves, on the one hand, from one embeddedness to another with ever-widening scope and, on the other, progresses along a dimension from prevailing-embeddedness-affect to prevailing-activity-affect. The metamorphic thesis may be concretely illustrated by the following examples. (1) When the affect of directed anger su-

perceives the diffuse temper-tantrum-like discharge of anger, it signifies the growing capacity of the small child to assert himself. Here embeddedness affect shifts to activity affect. At a still later stage similar anger may arise when the mother frustrates the child's growth towards independence. Anger may, however, still be an embeddedness affect when the child's "neurotic embeddedness need" is frustrated, e.g., when the mother refuses to wait on the child after he is capable of attending to his own needs. (2) In the early state of embeddedness affect, sudden new stimulation may cause avoidance. In the next stage, it leads to an alarm reaction with attending exploration, "What is it?" Perceptually this development culminates in a shift. Looking, touching, etc., for the sake of prolonging pleasurable sensations, give way to interest in objects themselves and the desire to find out what the object is like, but "not in the service of urgent present or future needs for food and the like." The child matures by becoming increasingly open to the world and interested in objects and persons for their own sakes. Into this framework one has to place Schachtel's entire theory of emotions, motivation, conflict, and cognition, as well as creativity. For example, the main source of conflict lies in the problems of 'becoming' or growth. Whenever reality demands from the growing individual that he emerge from embeddedness into a new phase of existence, it always means separation from former security. In the final analysis, anxiety becomes the threat of isolation from embeddedness, the threat of loneliness. Then the activity-affect becomes paralyzed or stunted. Stress and conflict may precipitate weakening of that affect and the seeking of former embeddedness. Hence what were formerly called the vicissitudes of instinct now become the danger of personality-arrest at certain stages of embeddedness. This may lead to an abandoning of "world-openness" and to the adoption of "closed patterns in personal relationships" or of "cultural rigidities."

It is now clear that *Metamorphosis* is not only developmental psychology but also the prologomena to a new personality theory: "To describe the various

stages and forms of embeddedness in later life would be tantamount to writing a compendium of various normal and neurotic security operations and forms of adjustment" (p. 51). Although no system of connecting propositions is formulated, certain intrinsic relationships seem to hold between the two basic affects and the two perceptual attitudes, the autocentric and allocentric. Autocentric perception originates in the "vital" senses and those modalities which are closer to the self, e.g., the olfactory, the gustatory, and passive touch. Autocentricity is, therefore, related to the "pleasure-unpleasure-boundedness" of the embeddedness-affect.



ERNEST G. SCHACHTEL

affect. Conversely, allocentric perception derives chiefly from the "distal" senses and belongs to the activity-affect where positive grasp and differentiating contact with the world predominate. The key concept which gives the two basic affects and the two perceptual attitudes a common developmental direction is that of "objectivation," which means an increasingly allocentric attitude and ability of the adult to turn with all his being—including the autocentric feelings—towards the experienced object. Phenomenologically, the grasp of the object requires acts of focusing upon all its aspects. Psychologically, it requires an act of interested turning towards the object in its totality with an attitude of "affirmativeness." "Thus allocentric perception in its most complete form is char-

acterized, not by the absence of primary autocentric sensations, but rather by fully turning to and complete openness towards the object. The perceiver . . . is open to the object with all his senses and sensibilities and shows a complete absorption or interest in it" (p. 179). Those who consider this conception as falling outside psychological science might reconsider, upon rereading the discussion of "intrinsically" versus "extrinsically" motivated behavior by Sigmund Koch, where the simple act of looking-at-a-painting for five minutes is used as a model for intrinsic motivation (1956).

This reviewer found interesting parallels between Koch's and Schachtel's thinking. The latter independently makes practically the same motivational distinction. As long as the object is desired as merely need-satisfying, autocentricity prevails. To perceive persons only as "means-ends" or things as "objects-of-use" constitutes a partitive perspective. Such isolation fails to do justice to the totality of the object in its own right. Treatment of self, others, and things, chiefly according to success and control, is bound up with the pleasure principle which here overrides the allocentric orientation. That can lead to social pathology. The convergence of problems in mental health and ethics, often pointed out by Fromm, receives new emphasis.

THE book may invite various criticisms, dependent on the scientific bias or theoretical allegiance of the critic. The methodologist may miss systematic rigor and cohesiveness in the formulation of the theory and the lack of emphasis on experimental test. He will also note that psychological description and inference are not sufficiently separated. Traditional psychoanalysts may complain that Schachtel's documentation of Freud, though thorough, is one-sided. They may also claim that his new developmental schema represents the familiar "psychosexual" stages reworded. (Yet this critique of a critique may wind up in quibbling about *Dogma Revisited* and not in a forward look towards generating workable hypotheses.) A case in point for raising new questions is the author's original analysis of

emotions, e.g., of "real" hope and joy going even beyond Sartre's magical interpretation. Also Schachtel's challenging explanation of why children insist on hearing a story retold unchanged is as ingenious as is his account of childhood amnesia. The first is a viable alternative to "repetition-compulsion," the second to "repressed infantile sexuality."

Viewed from the cognitive bias of this reviewer, the book has real depth and a stimulating thoughtfulness which gives the flavor of meeting a widely read and travelled connoisseur of the intellect and the emotions. Partly the reviewer might have been seduced by advance agreement with many points of Schachtel's book (cf. Scheerer, 1954, 114ff., 120, 123, 132; Reiff and Scheerer, 1959, 55ff.). He would, however, take exception to the somewhat inconsistent and harsh treatment of Ego psychology, especially Hartmann's concept of "conflict-free sphere." And why does Schachtel avoid referring to Hartmann's "autoplastic" and "alloplastic" and to William Stern's "autotelic," "heterotelic," and "introceptive"? Still and all, in the reviewer's opinion, the book represents a definite step forward in psychoanalysis.

REFERENCES

- DAVID RAPAPORT. Psychoanalysis as a developmental psychology. In Bernard Kaplan & Seymour Wapner (Eds.), *Perspectives in psychological theory*. New York: International Universities Press, 1960.
- SIGMUND KOCH. Behavior as "intrinsically" regulated: Work notes towards a pre-theory of phenomena called "motivational." In M. R. Jones (Ed.), *Nebraska Symposium on Motivation*. Lincoln: University of Nebraska Press, 1956.
- MARTIN SCHEERER. Cognitive theory. In Gardner Lindzey (Ed.), *Handbook of social psychology*. Vol. I. Cambridge: Addison-Wesley, 1954.
- ROBERT REIFF & MARTIN SCHEERER. *Memory and hypnotic age regression*. New York: International Universities Press, 1959.



There is something in every person's character that cannot be broken—the bony structure of his character. Wanting to change it is the same as teaching a sheep to retrieve.

—GEORG CHRISTOPH LICHTENBERG

Panorama of Psychology

Benjamin B. Wolman

Contemporary Theories and Systems in Psychology. New York: Harper & Brothers, 1960. Pp. x + 613. \$7.50.

Reviewed by NICHOLAS PASTORE

The author, Dr. Wolman, has a 1935 PhD from the University of Warsaw and has ever since been teaching psychology—together in four different languages, he says. He has also been in private practice in New York City. Just now he holds a full-time appointment at Queens College, Flushing. The reviewer, Dr. Pastore, is Associate Professor of Psychology at Queens College, Flushing. He is author of a book on The Nature-Nurture Controversy (King's Crown Press, Columbia University, 1949) and at that time was writing on need as a determinant of perception, just when the new look in perception was getting established.

THE book under review is an ambitious one for the author proposes, as the title itself suggests, "to give a comprehensive picture of the contemporary psychological theory" (p. ix). There is a definite need for a work of this kind. The most recent text, Woodworth's *Contemporary Schools* (1948), is somewhat dated although, to be sure, important segments of contemporary theory are covered in other books. At a first glance Wolman's book seems to fit the bill—it is long, apparently scholarly and comprehensive, and chock full of quotations. The author discusses, among other topics, behaviorism and its variants, psychoanalysis, Gestalt psychology, scientific method, and his personal "philosophy of psychology." Psychoanalysis receives the most extended treatment with approximately 30 percent of text pages devoted to it. The bibliography of 44 pages easily comprises over 1,000 entries. On closer inspection, however, the author's goal of an adequate undergraduate text is not realized.

The bibliography is excessively long.

Seven different works are cited for Tolman in the text but in the bibliography there are 65 entries; for Hull the corresponding figures are 9 and 51, and so on. Since the bibliography is not annotated it would be difficult for the student to know the relevance of an entry to some theoretical or experimental point. It is unlikely that the author himself felt called upon to read Russell & Whitehead's *Principia Mathematica*, and surely but little practical purpose is served in an undergraduate text by citations in a foreign language when a translation is readily available. Thus the author cites Helmholtz's *Physiological Optics* in German, but neglects to mention the Southall edition in English. In his discussions of Gottschaldt, Wulf, and Zeigarnik he fails to direct the reader's attention to excerpted translations in Ellis' *Source Book*.

The reviewer was struck by the following curious fact. Within the body of the text there are only 21 citations to separate experimental studies from 1940 to the present; 5 of the 21 fall in the period of 1950–1954; no experimental study is dated 1955 or later. The failure to rely on the corpus of experimental work may lie in the author's attitude toward the experimental method. For instance, in concluding the chapter on Freud, he writes: "Wasn't the unprecise, nonmathematical, nonexperimental, and nonrigorous Freud more sound, more scientific, more knowledge-producing, more promotive of scientific inquiry than anyone else?" (p. 282). In contraposing the attitude of the experimentalist to that of the clinician, he writes: "The scientifically minded clinician cannot help envying the experimentalist's precision. When the experimentalist says three and five equal eight, it is so. When the clinician says

3000 plus 5000 equals 8000 he is not sure he counted carefully; some errors are almost inevitable" (p. 515).

WOLMAN's text is faulty in the presentation and exposition of material. For example, he quotes verbatim (with errors) the postulates and corollaries of Hull's *Behavior System*, without sufficiently explaining the symbols or notation. Is this to be the task of the teacher? The student? Hilgard (*Theories of Learning*), in a similar treatment of the postulate set, resorted to paraphrase in order to mitigate the difficulties in comprehension by the non-expert. Moreover, Hilgard devotes considerably more space in elaborating the postulate set and in showing its relevance to experimental work.

Errors in fact and in quotation mar Wolman's text. Only a few can be given. In his quotation from Hull (p. 108, last paragraph), four notational errors can be counted and in dealing with Zeigarnik's experiment (p. 465) there are similar errors. On page 123 he writes: "Hull believed that 121 out of 178 theoretical statements included in the *Essentials of Behavior* were experimentally tested, and 87 percent of them were definitely validated." This brief paragraph has four factual errors. The 121 should be 123, the 87 should be 86. Hull's book is titled *A Behavior System*, and the quoted phrase is "substantially validated." Wolman's phrase, "definitely validated," is unfair to Hull because it implies a higher degree of validation. On page 433 he incorrectly executes the map analogy for the notion of isomorphism. Moreover, Wolman does not sufficiently distinguish a speculation from a fact in his discussion of psychoanalysis. Example: "The early perceptions are vague, inexact, and undifferentiated. Objects are perceived in a diffuse manner and often overlap each other" (p. 248).

In the reading of Wolman's text the reviewer had a rather definite *déjà vu* feeling, especially in the chapters on behaviorism and Gestalt psychology. Accordingly he decided to compare the text with some well known secondary sources and, subsequently, with some primary sources. In the task of establishing correspondences between Wol-

man's text and secondary sources, the reviewer was piqued by the author's frequent omissions of page references to either quotations or theoretical points and inexact references to the literature. Nevertheless the reviewer was able to establish 24 correspondences between Wolman (pp. 422-428) and Humphrey's *Thinking* (pp. 1-149) with regard to phrasing, organization, or communality of quotations and references. In the remaining pages of the chapter (pp. 431-442) the relationship to Woodworth's *Contemporary Schools* and Hilgard's *Theories* is apparent. Similarly, Wolman's treatment of Thorndike and Hull

bears an extraordinarily close relationship to Hilgard's. In these and other instances the dependence of the author on secondary sources becomes obvious.

Although the author is a practicing psychoanalyst, supplementing this activity by teaching at Queens College and Albert Einstein College of Medicine, his chapters on psychoanalysis are weak and not up to date. For example, his failure to present the views of Kris or Hartmann is notable.

For the reviewer the various deficiencies and inadequacies in Wolman's book render it unsuitable either as an undergraduate text or as a reference work.

Wet Thoughts about Dry Thinking

National Physical Laboratory

Mechanisation of Thought Processes. 2 vols. (Proceedings of a Symposium held at the National Physical Laboratory, 24-27 Nov. 1958). London: Her Majesty's Stationery Office, 1959 (distributed by British Information Services, New York). Pp. x + 531; 532-980. \$9.29.

Reviewed by BERT F. GREEN, JR.

Dr. Green, the reviewer, is a leader of a research group in the Massachusetts Institute of Technology's Lincoln Laboratory at Lexington, Massachusetts. He studied mathematics at Yale as an undergraduate, then, sponsored by the Educational Testing Service and working under Gulliksen and Tucker, he went on to a Princeton PhD in psychometrics. He has now been nine years at the Lincoln Laboratory, working more recently on digital computers and trying hard to put intelligence into a machine.

IN November, 1958, a symposium was held at the National Physical Laboratory, Teddington, England, "to bring together scientists studying artificial thinking, character and pattern recognition, learning, mechanical language translation, biology, automatic programming, industrial planning, and clerical mechanization." The 32 papers presented at the meeting, together with an

edited version of the discussion of each paper, have now been published in two volumes. Nearly all of the papers are concerned with either the automation of human functions or the construction of computer models for physiological or psychological processes. Together, they form a representative sample of current work in these fields and provide a good introduction to the brave new world of automata.

Variety was a stated intent of the symposium and it was certainly achieved. The authors include specialists from mathematics, physiology, psychology, biology, electrical engineering, phonetics, philosophy, medicine, and law. Most of them are from England, but the United States, France, Israel, and the USSR are also represented. The papers are equally various, both in content and quality. Most of them are written at a nontechnical level, although a few require specialized background. The spectrum of content runs from wild specu-

lation through reasoned theory and anticipated results to solid accomplishment, with neither extreme predominating. The edited discussions are sometimes helpful in clarifying arguments.

Four papers on automatic programming present a fine review of existing techniques for automatically producing computer codes from symbolic descriptions of processes. These papers presuppose an elementary understanding of computer programming, but they merit the attention of all who have the requisite background because they represent the only well-established success in automatic problem-solving. To be sure, the problem is straightforward and well defined, once the required process has been stated explicitly, and algorithms exist for its solution. Yet no one will deny that programming a computer presents a problem for a man. In fact, a good human programmer probably solves the problem in about the same way the computer does, so that an automatic programmer may even be considered a model for a human programmer.

The success of automatic programming stems largely from the invention of artificial, unambiguous languages in which to express the processes that are to be programmed. Mechanical translation and information retrieval are more difficult because they require the computer to deal directly with natural languages. Not much headway has been made yet in these two areas, but a good deal more progress has been made than one would suppose from the papers that appear in these volumes. Professor Y. Bar-Hillel argues vehemently that mechanical translation and automatic information retrieval are impossible. Unfortunately, the affirmative position is poorly represented, and the reader may be left with the wrong belief. In fact, the available evidence shows that a species of machine translation is clearly possible, and current progress suggests that natural language will yield to syntactic and semantic analysis, with machines eventually having sense enough not to render "pig has three letters" as "porc a trois lettres," despite Bar-Hillel's pessimism.

PSYCHOLOGISTS interested in complex symbolic processes will be disappointed

at the relatively minor emphasis on that topic as compared with neural nets or general theory. Dr. M. C. Minsky gives an excellent review of heuristic programming and other techniques for enabling computers to solve problems for which no algorithm or analysis is available. He abstracts the major features and devices of the existing 'intelligent' programs and places them in perspective. Dr. J. McCarthy proposes an 'intelligent' computer program that would take advice, in the form of declarative English sentences, and would then answer questions by reference to its received advice.

Three papers on pattern recognition represent very different techniques, and illustrate the kind of elaboration that a computer allows one to include in a model. Dr. W. K. Taylor describes a machine for recognizing visual forms, one that operates by comparing its input with a set of stored stencils, and selecting the best match. The speech recognizer designed by Professor D. B. Fry and Mr. P. Denis makes sequential decisions based on several sets of stencils. Mr. O. G. Selfridge's general model, Pandemonium, contains a hierarchy of input analyzers, each examining a different property of the input; the results are combined in weighted totals proportional to the likelihood of each potential pattern. Pandemonium includes a unique provision for automatically adjusting the analyzers and the weights to achieve optimum performance.

Several papers are devoted to models of nerve nets, or to networks of computer elements that seem patterned after notions about neural interconnections. These papers, which represent the growing trend toward 'dry physiology,' are seeking 'intelligent' behavior at a much different level from the other papers. The nets aspire to only the very simplest discriminations; they do not pretend to solve problems or translate languages. But the nerve-net models presented in these volumes are much too simple to correspond even to what 'wet physiologists' know about nerve cells. Only in the roughest way are these models correlated with reality.

There are several interesting and well-written papers laying out the characteristics that computer intelligences must

possess if they are to be models of human behavior. Arguing from the experimental evidence in the psychological literature, Dr. N. S. Sutherland makes an excellent case for the existence of many specific neural mechanisms for analyzing and categorizing stimuli rather than a few very general mechanisms. He cites innate behavior, peripheral blocking of stimuli, responses to competitive simultaneous stimuli, and various kinds of form discrimination as examples of specific processes, and he puts forth the notion that these processes get switched on and off by higher level controlling mechanisms. Dr. A. J. Watson reviews the literature on rat learning and concludes that rats learn first what cues to seek and then how to attain them. He feels that cue-seeking can be learned in the absence of any goal signal. Dr. H. B. Barlow reminds us that incoming stimuli must be recoded by the nervous system and argues that something like optimum coding is essential for the efficient use of the brain's memory capacity. Dr. John Brown shows that the trace model of memory can be made to work by assuming that the effect of decaying traces depends on the initial redundancy and coding in the traces and on the information available from other traces. The importance of these papers is not so much their particular arguments as in the immense contrast between the complexity and organization implied by the psychological facts, and the simplicity of most of the proposed models for machine intelligence. Some psychologists have been expecting computers to help them reduce the discrepancy between simplicity and reality that exists in most current psychological theories and models. Minsky's and Selfridge's papers show that this is not a forlorn hope, but the expectations have yet to be achieved.

The collection of papers in these volumes is well balanced and inclusive. While some current research is overlooked, most of the main ideas and methods are represented in some form. The brave new world of automata generates more than its share of nonsense, but psychologists willing to sift through the material in these volumes will find many interesting ideas about models of human behavior.

Anthropo-socio-psychiatrics

Marvin K. Opler (Ed.)

Culture and Mental Health: Cross-Cultural Studies. New York: Macmillan, 1959. Pp. xxii + 533. \$8.75.

Reviewed by FRANCIS L. K. HSU

Dr. Hsu is Professor of Anthropology in Northwestern University. He was born in China, has an AB from the University of Shanghai, a PhD in cultural anthropology from London, and has been teaching in the United States for 15 years, the last 13 in his present position. He has written three books of which *Americans and Chinese: Two Ways of Life* (Abelard-Schuman, 1953) is best known. He has edited a symposium on culture and personality, and has just completed the first of two volumes of comparative studies of Chinese, Hindu, and American ways of living. *Culture Patterns and Social Groupings* it will be called.

THE qualifications and professional connections of the editor are excellent indications of the nature and scope of the volume he edited. Dr. Marvin K. Opler, an anthropologist by training, is Professor of Social Psychiatry in the Department of Psychiatry with University of Buffalo's School of Medicine and concurrently Professor of Sociology in the Department of Sociology of the same university's Graduate School. He has been working in the field of social psychiatry since 1938 and is also Associate Editor of the *International Journal of Social Psychiatry* since its founding five years ago. These and the fact that his collaborators consist of six psychiatrists, two sociologists, two psychologists, and twelve anthropologists show how far the social sciences (anthropology and sociology) and the clinical sciences (clinical psychology, psychoanalysis, and psychiatry) have come together, or at least have attempted to.

The general aim of this symposium is to indicate "the variable effect of culture or cultural stress on mental health," and to represent the "appropriate meth-

ods" from epidemiological, psychoanalytical, psychological, and social sciences for studying it. Within this general scope the editor indicates a variety of topics on which he anticipates elucidation. Among them are: (1) the "difference between culture-personality study and scientific research into the cultural backgrounds of mental illness"; (2) the quantitative and qualitative variation in mental disorders according to different environments and the need for "using data from remote places of the world as a massive laboratory for the study of the relations of culture to mental health and illness"; (3) the need for "a psychodynamic view of how a culture typically operates and a special role for social and preventive psychology"; (4) the ascertainment of "trans-cultural values, universal needs of mankind and generic similarities in disorders around the world"; (5) the need for reshaping our "vague notions of normality"; (6) the assessment of the "needs of individuals and society," the origin of these needs and the nature of their etiology and dynamics; and (7) the task of accounting "for the cross-cultural variations in mental health with as few general constructs and laws as possible."

The symposium contains a number of original and brilliant papers which bear on some of these topics. The two reprints by A. I. Hallowell, the original articles of M. E. Spiro, of George DeVos and Horace Miner, of M. K. Opler on Irish and Italian contrasts, and of Jaco are analyses of qualitative or quantitative variations in mental disorders as they are related to different designs for living. The articles by A. F. C. Wallace, by William Caudill, by M. K. Opler (on Ute dream therapy), by S. D. Messing, and by G. M. Carstairs provide us with food for thought concerning the prob-

lem of culturally differentiated views and treatments of mental illnesses.

THE qualities of the contributions vary tremendously, however. For example, J. B. Loudon's paper on *Psychogenic Disorder and Social Conflict Among the Zulu* is so full of unsupported statements and so lacking in scientific sophistication that its inclusion comes to the reviewer as an astonishment. His unevincenced assertions are too numerous to quote, but, even if we overlook the lack of support, we shall still find it hard to defend the use to which he puts his statements. For example: "Now it seems reasonable to suppose that a certain percentage of Zulu men are latent homosexuals; my informants strongly denied that this was true, but they also stated that it was well known to be common among what the Zulu call the Nyasas—that is, the Africans from Central and East Africa; many of whom come to the Union to work. But I was also informed, by a man who had served a sentence in gaol in Durban, that homosexuality is common in prisons; and I heard a number of anecdotes relating to the lobola transactions which go on between one prisoner serving a life sentence and another who has a 'marriageable' juvenile prisoner under his control, care, and protection. It therefore seems possible to suggest that these male inverts suffering from ufufunyana may have been reacting, by developing a psychoneurosis, to their inherent reversal of roles, which has no sanctioned outlet—at least, none outside prison" (p. 362). We must ask: (a) What is the evidence that prisons in any part of the world are free from homosexuality? (b) Why prison homosexuality can be used as proof that some Zulu men are latent homosexuals? and (c) How can homosexual practices in prison, which are obviously conditioned by the lack of heterosexual opportunities, so unqualifiedly be regarded as evidence for a psychoneurosis involving inversion?

Against examples like this the reader will benefit greatly from the contributions of Hallowell, Spiro, Wallace, DeVos and Miner, Caudill, Jacob Fried, Thomas Gladwin, V. D. Sanua, and the

editor himself. Wallace's carefully documented and argued piece on how cultural change among the Iroquois was accompanied by a change in psychotherapeutic needs from catharsis to control; Caudill's insightful piece on the differences between the Japanese and American interpersonal relationships as reflected in the differences in the doctor-patient relationships in the two societies; Spiro's precise and thought-provoking five-step formulation linking culturally generated strains, institutional means for reduction of the strains, incidence of psychopathology, idiosyncrasy and cultural variability: these are but a few of the many excellent original contributions which make this symposium worthwhile.

However, some of the topics mentioned by the editor in his introductory chapter have received but sporadic or scanty attention. The reviewer agrees with the editor that there is a difference between culture-personality study and scientific research into the cultural backgrounds of mental illness, and that there is the need for cross-cultural perspective, but he fails to glean the contributions how our "vague notions of normality" could be reshaped, or what are the "needs of individuals and society" as well as their origin, or which are the "general constructs" that account for cross-cultural variation in mental health. There is no dearth of samples showing qualitative variation in mental disorders according to different designs of living, but there is here no progress on the problem of quantitative assessment at all.

THE problem of interdisciplinary research is enormous. Two decades ago it was difficult even to get the clinicians and the social scientists to sit down and talk business with each other. Today some of them are willing to talk or work with each other (as this and other symposia indicate). Nevertheless the social scientist sometimes falls in the trap of trying to be a third-class psychiatrist, whereas the clinician may still entertain the mistaken notion that any intelligent man can be an anthropologist. Consequently neither the contributors to this volume nor its editor can, in the final analysis, be blamed for most of its



MARVIN K. OPLER

shortcomings, which are perhaps reflective of the present state of the art of interdisciplinary research on culture and mental illness.

Perhaps, but only perhaps, the scientific impact of the present volume could have been a little greater if the editor had somewhat sharpened, revised, and shortened his list of topics into the following:

- (1) Criteria for mental illness and mental normality according to the norms of each society.
- (2) The distinction in each culture between mental illness and delinquency.
- (3) Differentiation of mental illnesses and their treatments which are peculiar to certain societies from others which are universal to all societies.
- (4) The comparative study of culturally provided safety valves such as the Zar cult of Ethiopia described by Messing and Iroquois death rituals analyzed by Wallace.
- (5) The problem of quantitative assessment of the frequency of mental illness in different cultures.

The reviewer does not claim that this revised list contains all the problems relevant to culture and mental illness, or that the problems are easy to tackle and to solve, but he does think that a more precise formulation of the prob-

lems might have made the fruits of this volume easier to gather. For example, the papers by Morris E. Opler on *Family, Anxiety, and Religion in a Community of North India*, though an excellent piece in itself, has only a very marginal relevance to the present volume and would better have been published elsewhere. The essay by Tsung-yi Lin on two types of delinquent youth in Formosa exemplifies a gross failure to distinguish between mental illness and delinquency. The material in E. A. Kennard's *Major Patterns of the Mental Hospital U.S.A.* needs to be related more specifically to Caudill's material from Japan and Carstairs' material from England. As they stand, Kennard's data on U. S. hospital patterns cannot be compared with corresponding situations in the other two societies. And if the paper by H. B. M. Murphy was revised, its author could have been spared the pains of playing the part of a nineteenth-century anthropologist.

However one may criticize it, the present symposium will be a great stimulus to the social scientists and the clinical scientists concerned with the relationship between culture and mental illness, and it should become a landmark in the study of the history of culture and personality. It is encouraging to see so many clinicians interested in the cultural and social factors and taking them so seriously. It is also heartening to know that, in spite of the fact that the popularity of studies of culture and personality has waned a bit in recent years, so many social scientists remain hard at work on various aspects of this nebulous subject. The wide geographical coverage of the present symposium cannot but broaden the student's perspective. The wealth of subject materials presented has shown beyond any reasonable doubt that mental illness and mental health are closely related to variation in culture.



I would entreat these wise and prudent fathers to consider diligently the difference between opinionative and demonstrative doctrines, to the end that they may assure themselves that it is not in the power of professors of demonstrative sciences to change their opinion at pleasure.

—GALILEO

Job Factors, Attitudes, and Effects

Frederick Herzberg, Bernard Mausner, and Barbara Bloch Snyderman

The Motivation to Work. (2nd ed.) New York: John Wiley & Sons, 1959.
Pp. xvi + 157. \$4.50.

Reviewed by ROBERT L. KAHN

The reviewer, Dr. Kahn, is now Professor at The University of Michigan and also program director in the Survey Research Center. He is especially interested in how people behave in organizational settings and in the attitudes of workers. He reviewed Selznick's Leadership in Administration (Row, Peterson, 1957; CP, Jan. 1959, 4, 46).

SEVERAL months have passed since I first read *The Motivation to Work*, and during that interval I have become increasingly interested in the book and have come to think increasingly well of it. It is, in my view, full of problems and promise, both methodological and substantive. When I first read the book, I was disturbed at the undiluted reliance on each respondent's retrospective selection of a time of high and a time of low morale on the job, and his identification of the factors which caused these periods, and of the short- and long-range effects of each. As a result, I scrutinized the research results with the jaundiced eye of methodological purity and found ample basis for skepticism. But there is a certain plausibility and consistency to the findings of Herzberg and his colleagues, enough so that they deserve to be tested and examined, rather than dismissed on the ground that there is the possibility of artifact. Moreover, their methods are interesting in themselves and could certainly be used in research designs which offer more in the way of validation. A brief description of this research will put the reader in a position to make some judgments of his own.

Herzberg and Mausner have been interested for some years in the meaning of work and in attitudes toward work. In 1957 they published (with R. Peter-

son and D. Capwell) a comprehensive survey of the literature in this area. One of their criticisms of the work which they examined involved "its fragmentary nature." They found studies in which job-related attitudes were treated as independent variables and their effects sought in terms of such criteria as performance, turnover, and absence. And there were other studies in which attitudes toward the job were treated as dependent variables, and causal relationships proposed with various demographic and situational factors. Herzberg and his associates became convinced that job attitudes could be understood more fully if their causes and effects were brought into a single research design. This very general conception of the factors-attitudes-effects sequence (F-A-E complex) as the appropriate unit for study is the starting point of the present work.

The next question before the research group was how the FAE complex could best be studied. Their answer was an idiographic approach which owes much, as they point out, to the critical-incident technique of John C. Flanagan. About 200 accountants and engineers were chosen from nine companies in the Pittsburgh area. In a semi-structured interview each of these respondents was told that the researchers were primarily interested in hearing about actual experiences on the job. He was invited to "start with any kind of story you like—either a time when you felt exceptionally good, or a time when you felt exceptionally bad about your job, either a long-range sequence of events, or a short-range incident." When the respondent had provided the first anecdote, he was asked for a second, with the specification that it differ from the first in duration of the incident and in

affective flavor. Thus, a respondent who had described an extended period of good feelings was asked for a short-range incident involving negative attitudes toward the job. The remainder of the interview was devoted to a search for the determining factors and the effects of the incidents and attitudes on which the stories were centered.

Causal factors were coded in a dozen or more substantive categories (for example, advancement, salary, responsibility) and at two levels. The first level categories were intended to reflect only objective changes in the situation. The second-level categories were purposefully phenomenological; they were intended to give the meaning of situational events from the respondent's point of view. Thus a change from one job to another might receive a first-level code of *advancement* and a second-level code of *recognition*. The effects of the sequences of high and low morale were coded under five main headings: *performance, turnover, mental health, interpersonal relationships, and attitudes* (other than job attitudes as such).

PERHAPS the single most important finding from this work is that satisfaction and dissatisfaction on the job are caused by different factors, rather than by varying amounts of the same factors. There are, in other words, satisfiers and dissatisfiers. Job dissatisfaction is caused by contextual factors like supervision, interpersonal relations, physical working conditions, and salaries. As the authors put it:

When these factors deteriorate to a level below that which the employee considers acceptable, then job dissatisfaction ensues. However the reverse does not hold true. When the job context can be characterized as optimal, we will not get dissatisfaction, but neither will we get much in the way of positive attitudes.

The factors that lead to positive job attitudes [achievement, recognition, work itself] do so because they satisfy the individual's need for self-actualization in his work. . . . The conditions that surround the doing of the job cannot give him this basic satisfaction; they do not have this potentiality. It is only from the performance of a task that the individual can get the rewards that will reinforce his aspirations. . . . Factors in the job context meet

the needs of the individual for avoiding unpleasant situations. In contrast to this motivation by meeting avoidance needs, the job factors reward the needs of the individual to reach his aspirations. These effects on the individual can be conceptualized as actuating approach rather than avoidance behavior (p. 114).

In addition to drawing these qualitative distinctions between those factors which act as satisfiers and those which act only as dissatisfiers, Herzberg and Mausner found that the good feelings induced by the intrinsic content of the job or by the successful doing of it tend to be lasting rather than temporary in nature. On the other hand, the contextual factors which appeared most often as dissatisfiers tended to result in more short-range changes in attitude. Finally, the effects of these high and low periods of morale were very marked, according to the respondents. The majority of people interviewed reported that their performance was affected by their attitudes—more often by favorable than by unfavorable attitudes. A significant minority reported actually quitting or giving serious consideration to quitting during 'low' periods. Reports of psychosomatic responses were infrequent, but about one respondent in four noted effects in interpersonal relations and a majority experienced changes in self-confidence and in attitudes toward career and company.

THAT these findings differ in several major respects from those of most other investigators is undeniable. The distinction between satisfiers and dissatisfiers is new, and the close linkage between attitudes and performance, while not new, is unusual. What is not clear are the reasons. We may be seeing in the results some special characteristics of the nine Pittsburgh companies on which the Herzberg-Mausner research is based, or some special characteristics of accountants and engineers. A more likely possibility, in my own opinion, is that these findings are in part the result of relying entirely on the respondent for a description of his job attitudes, the factors which occasioned them, and their behavioral consequences. For example, the factor which was coded most often as a reason for high job-attitude sequences was *recognition*, but the factor

which was coded most frequently as a reason for low job-attitude sequences was *unfairness*. Now suppose that most respondents begin with the ego-protective notion that they are reasonably able and deserve recognition. The recognized respondent says, in effect: "I am meritorious and others perceive and reward my merit." The unrecognized respondent says: "I, too, am meritorious, but others fail to perceive and reward my merit. Hence, their unfairness and my low attitudes."

I do not think that such an interpretation can be ruled out, given the limitations of the present research, but neither can we neglect the possibility that Herzberg, Mausner, and Snyderman have discovered some major new facts about the interaction of worker and work environment. The replication and extension of their findings, especially with independent measures of environmental factors and of performance criteria, would be of major significance for the social psychology of large organizations.

The Freudian Penetration of Literature

Louis Fraiberg

Psychoanalysis and American Literary Criticism. Detroit: Wayne State University Press, 1960. Pp. xii + 263. \$5.95.

Reviewed by O. B. HARDISON, JR.

Dr. Hardison is Assistant Professor of English at the University of North Carolina. After his doctorate at the University of Wisconsin, he studied in Rome and taught at the University of Tennessee and at Princeton. He is chiefly concerned with literary criticism, teaches a graduate course in the subject, and is an editor of A Dictionary of Poetry and Poetics which the Philosophical Library is about to publish.

READERS of CP will need no reminder of the immense cross-fertilization which has occurred between psychology and literature. The humanistic heritage which Freud received through his education is everywhere apparent in his major works. Because of Freud it is almost axiomatic that the psychologist should be familiar with the insights into character available in literature. Likewise, students of literature have found that psychology is a powerful tool and that to ignore it is to impoverish criticism. Aside from scattered chapters in surveys and articles on the subject there has, however, been only one book-length study of the mutual influence of Freud and literature. This is Frederick

J. Hoffman's *Freudianism and the Literary Mind* (1945). Now a second work can be added to the list.

Louis Fraiberg's *Psychoanalysis and American Literary Criticism* is a carefully written, informed study of the impact of Freud on criticism. It begins with one of the best surveys which I have read of Freud's own use of literature and continues with chapters on the European Freudians (Ernest Jones, Hanns Sachs, Ernst Kris) who extended and elaborated Freud's suggestions. The subsequent chapters (about one-half of the book) review the use of Freud by six American critics, of whom Edmund Wilson, Kenneth Burke, and Lionel Trilling are the most important. The chapter on Trilling is particularly good. Fraiberg concludes that "no other critic has shown a comparable grasp of the significance of psychoanalysis."

Neither critics nor psychologists should find much to quarrel with in Fraiberg's account. It is obviously based on extensive and thoughtful research. Readers may differ concerning the justice of his evaluation of individual writers (for example, his evaluation of Kenneth Burke scarcely accounts for Burke's wide in-

fluence), but there is no doubt that his case is supported by extremely persuasive evidence.

THE serious question to be raised about Fraiberg concerns his omissions. In the first place, his title is misleading except to a specialist. By *psychoanalysis* Fraiberg means *Freudian psychoanalysis* pure and simple. Whatever their intrinsic merits, Jung and Adler have had an important influence on recent criticism. It would be fair to say that at present Jung rivals Freud as the major authority for psychological criticism. The reason for this is instructive. Freudian psychology is essentially an empirical discipline, based on an association theory of mental processes, and aimed at practical results—therapy. It is generically related to the association theories of the British empiricists, beginning with Locke. At the end of the eighteenth century, however, with the explicit aim of refuting the English associationalists, Kant demonstrated the existence of mental categories which, being prior to organized perception, are unaffected by association. Adopted by critics like Schiller and Coleridge, the *a priori* factors became 'imagination,' a fusing and unifying force independent of environment, personality, etc. This idea, which is central to esthetic criticism, can be found in varying forms in Croce, Bergson, T. S. Eliot, and Northrop Frye (to name only a few). Clearly Jung's collective unconscious is analogous to imagination, and many of Jung's descriptions can be read as a psychologist's version of esthetic criticism. Esthetic criticism has proved especially useful in the analysis of literature. Naturally, it turns to Jung rather than Freud for its psychology. In ignoring the Jungians, Fraiberg has presented an extremely narrow view of modern criticism.

A second limitation is Fraiberg's failure to emphasize the fact that there is not one Freudian criticism but several. Fraiberg concentrates on what might be called 'biographical Freudianism,' in which the literary work is treated as a means of psychoanalyzing the artist. This leads him to devote chapters to Ludwig Lewisohn, Joseph Wood Krutch, and Van Wyck Brooks, authors who are

at best secondary and whose work chiefly illustrates the popular distortions of Freud during the '20s and '30s.

While concentrating on biography, Fraiberg largely ignores the critics who have used Freud as a means of understanding the nature of literary structures. These critics use biography but not as an end in itself. Their method is anticipated in Freud's *Dream and Delusion*, rather slighted by Fraiberg. It is used by F. C. Prescott, the first American critic to attempt a system based on Freud. Prescott's *Poetry and Dreams* appeared in 1912, followed by two extremely important works, *The Poetic Mind* (1922) and *Poetry and Myth* (1927). For reasons difficult to comprehend Fraiberg has nothing to say about these works.

Among other Freudian critics, one should mention the historical school, which studies the influence of Freud on writers like Joyce, O'Neill, Lawrence, and Tennessee Williams in much the same way as one might study the influence of St. Thomas Aquinas on Dante. In the '20s there was a tendency to ignore Freud's cautions concerning symbol in favor of the often arbitrary interpretations of Wilhelm Stekel's *Die Sprache des Traumes*, but more recent uses of the method, like Kenneth Burke's concept of 'symbolic action,' have been far more significant. Finally, the analysis of the literary work as the collective daydream of the audience—as a document with more to tell us about the reader than the artist—is an important recent development of Freud evident in studies of popular literary forms (e.g., Auden's *The Guilty Vicarage*, a study of the detective story) and literary classics (Leslie Fiedler's *Come Back to the Raft Again*, *Huck, Honey*, a study of *Huckleberry Finn*).

In view of the rich complexity of the relationship between psychology and literature it would be unfair to condemn Fraiberg for not covering the whole field. However, an introduction which at least surveyed the subject would have strengthened his book and avoided the serious danger of misleading the reader. In saying this, I wish to repeat that what the book sets out to do is done well. I believe that CP's readers will find it useful and stimulating.

Child Psychiatry

(j.g.)

Pearl H. Berkowitz and Esther P. Rothman

The Disturbed Child: Recognition and Psychoeducational Therapy in the Classroom. New York: New York University Press, 1960. Pp. x + 204. \$4.00.

Reviewed by LEON GORLOW

The two authors have worked for many years in the children's wards of psychiatric hospitals and in the special schools of New York City. Dr. Berkowitz teaches at the Bellevue Hospital and also lectures on child development at Queens College. Dr. Rothman is a practicing psychologist and principal of one of the "600 schools" for delinquents and trouble-makers in New York City. The reviewer, Dr. Gorlow, is Associate Professor of Psychology at Pennsylvania State University, where he teaches in the area of psychological adjustment and personality theory and is Coordinator of Practicum Training in the University's Psychological Clinic whither many disturbed children come. He has recently published with Walter Katkovsky Readings in the Psychology of Adjustment (McGraw-Hill, 1959).

As everyone knows, practitioners in mental health and other people aware of the immensity of the problem of psychological distress have turned to other social agencies and institutions for solutions. For a long time now, the context of teacher-in-classroom has been regarded as a possible vehicle for early identification and treatment of maladjustment. The idea has been to render teachers capable of detecting the personal difficulties of children and of providing them with some form of treatment. (Some professionals, of course, have hastened to qualify the latter function.) The movement of child development in our teachers' colleges and the more recent efforts to extend psychotherapeutic principles to classroom interactions are examples of the

effort to enlist the aid of teachers in the mental hygiene movement.

The Disturbed Child's subtitle, *Recognition and Psychoeducational Therapy in the Classroom*, reflects the intent of this volume and places it in the perspective of other attempts to manage the overwhelming problem of mental hygiene. The authors, writing from their experience as teachers of disturbed children, begin with the assertion that the teacher is in the most favored position for detecting psychological abnormality and also in a most favored position to act as a preventive agent. They, therefore, set themselves the task of providing the reader (the classroom teacher) with an understanding of psychopathology and some principles relating to psychological treatment in the classroom situation.

While Berkowitz and Rothman acknowledge that "a teacher is not primarily a diagnostician and may not be interested in making fine classical distinctions between various types of disturbed behavior," the major portion of their book is devoted to a delineation of most of the major psychiatric categories. After an introductory chapter asserting the need for the teacher's recognition of disturbance, these are the following chapters which indicate the burden of what is to come: *The Schizophrenic Child*, *The Neuroses*, *Sexual Deviations in Children*, and *Psychopathic Personality*. In effect, the first 115 pages of this small volume is a text (j.g.) on psychiatry. It is worth noting that the authors' general orientation is Freudian so that, in their discussion of psychopathology, they are able to write, in passing, of instincts, ego development, defense mechanisms, and the psychosexual theory of personality development.

WITH respect to helping teachers provide children with a psychoeducational experience (treatment) in the classroom, one notes that the authors' main thesis involves defining a condition of "need-acceptance therapy" which purports to offer children assistance with their personal distress. As I understand it, need-acceptance therapy consists mainly in the caution that children who are disturbed psychologically

will need, therefore, to interact with a teacher who is able to accept the child's disturbance, his emotional storms, his aggression, and his anger; that is to say, disturbed children need to relate themselves to a stable adult who remains free of turmoil over the behavior of the child. While this may be desirable classroom management, the authors have not dealt with the important problem of identifying and training the kind of adult who could behave in this desirable fashion toward children.

The volume, to provide a concrete demonstration of some psychoeducational practices, ends with brief verbatim excerpts from a single class session. A class of seven children from the ages 9 through 12, most of whom were diagnosed as schizophrenic, is reviewed. In these few pages of transcript, it is extremely difficult for the reader to become aware of principles and guided techniques under application. As I read the brief material I felt that the teacher was kind, undemanding, protective, and stable, but I had no real sense that she was exerting control derived from some systematic position.

When I set the book aside, I could not help feeling that Berkowitz and Rothman have not achieved their goal. The volume does not actualize its intention of teaching recognition and classroom therapy any better than do the other available texts in the area of mental hygiene and adjustment. A good deal of careful work still needs to be done about the classroom as an arena for transactions relevant to mental health. In view of the relatively small amount of attention given to this kind of research, it may be that the present volume is premature. Its potential users also need to be told that the volume does not contain a bibliography beyond some few references to Fenichel, L. Bender, and Paul Schilder. This fact alone imposes a severe limitation upon the reader who is not led to other significant material about any of the issues at hand.



The goal of education is the ability to distinguish the first-rate.

—SIR RICHARD LIVINGSTON

Psychotherapy in Soviet Society

M. S. Lebedinskii (Ed.)

Voprosy Psikhoterapii [Questions of Psychotherapy]. Moscow: Medgiz, 1958. Pp. 386.

Reviewed by MARK G. FIELD

Dr. Field, the reviewer, is Research Associate in the Russian Research Center at Harvard University and also Lecturer in Harvard's Department of Social Relations. He is a sociologist with a primary interest in the social institutions of the Soviet Union and a special interest in the Soviet medical profession. He is author of Doctor and Patient in Soviet Russia (Harvard Univ. Press, 1957) and expects to publish with M. S. Schwartz within the year New Approaches to Mental Illness Care (Basic Books).

THE emergence, or the re-emergence of psychotherapy as an accepted and ideologically approved mode of psychiatric treatment in the Soviet Union may be indicative of changes that have been taking place in Soviet psychiatry in the last ten years. Earlier official attitudes had considered psychotherapy as "non-materialistic," i.e. "idealistic," and therefore nonscientific and not acceptable. The realization that the physiological therapies based on Pavlov's theories, particularly sleep therapy, were inadequate for many types of mental illness and emotional disorders, particularly the neuroses, must have led those officially in charge of neuropsychiatric treatment to the search for a position that would enable them to use psychotherapy. Strangely enough it was the Joint Session of the Academy of Sciences and of the Academy of Medical Sciences held in 1950, whose aim was to put all of Soviet medicine on a "Pavlovian" basis, that led to the recognition that psychotherapy could be justified even on Pavlovian grounds. Soviet theoreticians argued that Pavlov's theory of the "second signal system," according to which verbal stimuli could substitute

for physical stimuli in the conditioned reflex arc, had been sadly neglected in Soviet psychiatry. Since psychotherapy uses words, then its use was in line with good Pavlovian doctrine.

The book under review is a reflection of the interest of Soviet psychiatry in psychotherapy. This renewed interest, however, does not, in any respect, extend to the acceptance of psychoanalysis or "Freudism," as it is sometimes called in the Soviet Union. Freud's doctrine is still very much beyond the pale. Furthermore, it appears that Soviet psychiatry is still quite isolated from contemporary trends in the West. Soviet psychiatrists often in their books and publications talk of "national" and "foreign" scientists and psychiatrists, meaning that the two belong to different worlds, the world of socialism and progress and the world of capitalism and decadence. Scientists in the capitalist world are then divided into "progressive" and "reactionary" types, and the work of progressive ones is cited with approval and used in the Soviet Union as long as it fits current Soviet theory.

The book consists of the basic materials presented at the All-Union Conference on Psychotherapy in 1956. This was apparently the first time that a conference had been devoted in its entirety to this subject. Previously there had been discussion of psychotherapy, but it had taken place only in one of the sections of the Congress of Neuropathologists and Psychiatrists held in 1948. The 56 papers are presented here in six parts of unequal length. Part I, entitled *Theoretical Questions of Psychotherapy*, consists of 14 papers, and contains discussions of several aspects of psychotherapy, including particularly the physiological basis of psychotherapy, hypnosis, and basic questions of the methods of group psychotherapy of the neuroses. Part II is devoted to the psychotherapy of the neuroses. It presents 13 papers, ranging from the psychotherapy of obsessive states and psychasthenia to the treatment of phobic states, hysterical states, to the use of suggestion in the treatment of neuroses, the use of psychotherapy in conjunction with therapeutic sleep in some reaction states, the psychotherapy of psychogenic impotence,

and psychotherapy of children. Part III deals with the psychotherapy of psychoses in eight papers, several of which are devoted to the treatment of schizophrenia. Part IV, three papers, covers the treatment of alcoholism and tobacco smoking. Part V, *Psychotherapy in Somatic Diseases*, consists of 12 papers concerned with the use of psychotherapy with patients with different types of diseases—patients with bronchial asthma, hypertensive diseases, obstetrical and gynecological conditions, and dermatological conditions. Part VI, *General Questions*, includes six papers on such problems as psychotherapy in sanatoriums and resorts, medical evaluation of disability, and coping with

diseases of iatrogenic origins. One paper is devoted to group psychotherapy and the movies, and another to a description of the organization of psychotherapy in the out-patient clinic.

The primary interest of this book is not that it presents radically new and exciting ideas that are unknown in the West. Rather it lies in the fact that it affords the West an interesting insight into psychotherapy and its use at the present time in the Soviet Union. It gives the reader a general knowledge of the context of psychiatric treatment in the Soviet Union and as such is recommended to interested Western psychiatrists and clinical psychologists who can read Russian.

Testing the Untestable

Edith Meyer Taylor

Psychological Appraisal of Children with Cerebral Defects. Cambridge, Mass.: Harvard University Press, for the Commonwealth Fund, 1959. Pp. xviii + 499. \$8.50.

Reviewed by ALAN O. ROSS

Dr. Ross is Chief Psychologist of the Pittsburgh Child Guidance Center, as well as Adjunct Associate Professor in the University of Pittsburgh. He has been interested in children always and in brain injuries since his PhD days at Yale less than a decade ago. Four of his publications deal with cerebral palsy, but his chief interest lies in the professional problems of clinical child psychology. In fact he has just written a book called The Practice of Clinical Child Psychology (Grune & Stratton, 1959).

BOBBY is four years old. Severely handicapped with cerebral palsy, he is unable to walk and can do very little with his hands. His speech is hardly intelligible and he can sit only for short periods of time.

You are asked to evaluate this child and to assist his parents in educational planning. How would you proceed? Describe the tests you would use, give a rationale for your choice, and justify the order in which you would administer

the tests. Tell what you would look for in the child's responses and explain how you would evaluate the results in the light of available developmental norms.

The hapless clinical psychologist, faced with this problem in his ABEPP Examination, would be well prepared if he had read this book, for in it he could find the answers to all of these questions. Taylor describes and discusses repeated longitudinal evaluations of seven 'untestable' children like Bobby and follows this by a comprehensive introduction to techniques appropriate for the examination of children with cerebral pathology.

The author's professional background was ideal preparation for writing the book. A doctorate under Felix Krueger at Leipzig, followed by experience with Piaget in Geneva and Gesell at Yale, led to twelve years of clinical activity in the neurological division of Boston's Children's Hospital. Since 1955 she, a Diplomate in clinical psychology, has been with the Cerebral Palsy Unit of the Children's Medical Center in Boston.

JOURNAL OF EDUCATIONAL PSYCHOLOGY

This journal is now published by the American Psychological Association. It is a bi-monthly; issues appear in February, April, June, August, October, and December.

All back issues and subscriptions up to and including the May 1957 issue are the property of Warwick and York, Inc., 10 East Centre Street, Baltimore 2, Maryland.

Subscription, \$10.00 Single
Foreign, \$10.50 Copies, \$2.00

Address new subscriptions
and
renewals to:

AMERICAN
PSYCHOLOGICAL
ASSOCIATION

Subscription Department
1333 Sixteenth Street, N. W.
Washington 6, D. C.

Dr. Taylor's description of her work gives the reader the sense of being in the presence of a master craftsman. She commands more than one hundred different techniques, each with a number of variations and modifications, and uses these tools with the flexibility and resourcefulness which alone make it possible to test the 'untestable.' Critical of the emphasis on "rigid statistical measurements," she is more interested in the process the child uses in approaching a task than in the score he achieves. She holds that qualitative aspects of the performance are often the sole indicators of cerebral pathology and repeatedly points out that numerical results obscure the essence of a child's test behavior.

This book is a valuable vade mecum for the psychologist who encounters brain-injured children in his clinical work. It derives its strength from the fact that the author has had personal clinical experience with every test she discusses. Yet this fact is also the source of one of the book's weaknesses for it leads to the omission of some of the more recently introduced techniques, such as Raven's Colored Progressive Matrices, the Columbia Mental Maturity Scale, the Archimedes spiral, and the Trail Making Test. On the other hand—and true to her aim to revive some of the older scales—she covers antiques like the Lincoln Hollow Square Form Board (1923), discontinued models like the Wood Picture Completion Test, and imported rarities like the Rey-Osterrieth Complex Figure Test.

THE field of testing children suspected of having a cerebral defect is beset by three difficulties: The lack of well-standardized developmental norms; the absence of a valid, independent criterion (short of a post mortem); and the want of a workable theoretical framework.

Taylor tries to come to terms with the first of these difficulties by citing norms from standardized intelligence tests, though these are invariably based on children without handicap. Many of the techniques she finds most useful have had little or no standardization, despite their long life. There is, for ex-

ample, the material from the 38-year-old Kuhlman Scale of which Taylor says that it could have "interesting possibilities" if age norms with qualitative differentiation could be established. Occasionally the author draws on her extensive experience to tell us that, on a specific test, "eight-year-old handicapped children may do at least as well as normal six-year-olds." The practicing clinician would gladly accept more statements beginning with "experience shows," were they to introduce such valuable, though informal and undocumented, norms.

The author tries to meet the second problem, that of the criterion for brain injury, by basing her discussion on children whose damage is so severe that there is little question of the presence of cerebral pathology. This selection enables her to illustrate her clinical orientation which is more concerned with a child's abilities and deficiencies than with the diagnosis of brain injury per se. Yet the book is explicitly meant for the psychologist who is interested in "differential diagnosis in children with cerebral defect," and he may find that Taylor is of little help in the borderline case where the question is not one of extent of damage but of the presence or absence of injury. Our author admits that this differentiation is "sometimes impossible" and reassures the "younger, inexperienced psychologist" that it is not necessary to come up with a definite answer in every case.

The third problem, that of the lack of a theoretical framework, falls outside the scope of this book, which is avowedly practical rather than theoretical; yet reading it one cannot help wondering whether there might not be some central themes which could help to unify the diverse findings. There are a few points where the author attempts to explain why certain defects are repeatedly found in brain-injured children, and the reader who likes a theory on which to hang his facts will welcome these passages and wish there were more.

May this male reviewer be granted one personal abreaction before concluding. He is not really a misogynist, yet takes exception to the author's unrelenting use of the feminine gender in referring to the psychologist!



WILEY'S SILVER ANNIVERSARY

IT was in the early 1930s that John Wiley and Sons, founded in 1807 and long famous for their engineering textbooks, decided to go in for psychology and published, in 1935, the first of the Boring-Langfeld-Weld (BLW) texts, *Psychology: a Factual Textbook*, which was intended to be a book of psychology's facts, with controversial opinion omitted, a depersonalized text like the engineering texts to which Wiley was accustomed. In that same year Wiley put out J. G. Jenkins' *Psychology in Business and Industry*. Thus 1960 becomes, as it were, a silver anniversary for the Wiley folks in the business of psychology.

The start was slim. They put out the first of P. T. Young's books, *Motivation of Behavior*, in 1936, skipped 1937, and then came along with the Stevens and Davis' *Hearing* and the Katz and Schank's *Social Psychology* in 1938, with nothing the next two years—five books in the first quinquennium.

There were also five books in the second quinquennium: Cantril's *Psychology of Social Movement*, McKinney's *Psychology of Personal Adjustment*, J. G. Miller's *Unconsciousness*, P. T. Young's second book, *Emotion*, and then the first edition of Carmichael's *Manual of Child Psychology*—all in 1941–1945. Just after these came the Sherif and Cantril's *Psychology of Ego Involvements*, Andrews' *Methods*, and another BLW, which gets us through 1948.

It was in 1948 that Wiley started on psychology in earnest. There have been about ninety books in these last dozen years, enough to make CP wonder if this year had not better be called the

linen anniversary (as being a twelfth), with gestation the name for what went on in the preceding thirteen years.

There was a high point of five books in 1949, a batch that included the now classic Hebb's *Organization of Behavior*, E. G. Wever's *Theory of Hearing*, and the first edition of McNemar's *Psychological Statistics*. Presently there was another spurt to match the general psychological explosion: seven books in 1955, nine in 1958, twelve in 1959, and maybe fourteen in 1960, if Wiley reads the omens aright.

In the 1950s Wiley's publication of important books becomes too rapid for specific attention here. It's like the busts around the Princeton chapel, too many, Greatness killing off Greatness contending for the threshold of apperception. CP will name twenty of the eighty for 1951–1959, just for the fun of telling you how it reacts, what its biases and ignorances are. Here is CP's invidious upper quartile.

Stevens' *Handbook of Experimental Psychology*
The Hixon Symposium on *Cerebral Mechanisms*
Geldard on the *Senses*
Weizenhoffer on *Hypnotism*
The second edition of Carmichael's *Manual of Child Psychology*
Floyd Allport's *Theories of Perception*
Bush and Mosteller on *Stochastic Models for Learning*
Anne Roe on *Occupations*
Whorf and Carroll on *Language, Thought and Reality*
Bruner, Goddnow, and Austin on *Thinking*
Calvin Hall and Gardner Lindzey on *Theories of Personality*
Luce and Raiffa on *Games and Decisions*
Torgerson on *Scaling*

Janis on *Psychological Stress*
Hollingshead and Redlich on *Social Class and Mental Illness*
Mason Haire on *Organization Theory*
Duncan Luce on *Choice Behavior*
Mandler and Kessen on *Language of Psychology*
John Thibaut and Harold Kelley on the *Social Psychology of Groups*
Robert Watson on *Psychology of the Child*

That's twenty. There are sixty more to choose from if you do not like these, and CP will print your little letter saying that you think CP's taste is depraved and that So and So's *Such and Such*, published by Wiley in the 1950s, is ever so much more important than what CP picked out.

Wiley is making one of the largest and most important contributions to modern psychology. When CP counted heads in a sample in 1955, McGraw-Hill, Macmillan, and Harper led in number of books published; Wiley was fourth (CP, Feb. 1956, 1, 46). When CP counted its own reviews for 1956–1957, Wiley was still fourth: McGraw-Hill, Harper, Free Press, Wiley (CP, Sept. 1958, 3, 248f.). With its recent spurt, Wiley may be overtaking McGraw-Hill. Wiley clearly has given psychology many of its good and important books, but so have the other leaders. Appleton-Century-Crofts' standards remain high, but they publish somewhat fewer books (E. B. Newman, CP, June 1958, 3, 149f.). Quality can hardly be polled, but if anyone wants to count the publishers of books reviewed in CP's first five volumes, CP will gratefully publish the figures, provided it gets them by 1 June 1961.

Meanwhile congratulations to Wiley psychology, twenty-five years old, and now shooting up fast in adolescence.



The skin of the man of letters is peculiarly sensitive to the bite of the critical mosquito; and he lives in a climate in which such mosquitoes swarm. He is seldom stabbed to the heart—he is often killed by pin-pricks.

—ALEXANDER SMITH



Psychotherapy in Outline Form

John G. Watkins

General Psychotherapy: An Outline and Study Guide. Springfield, Ill.: Charles C Thomas, 1960. Pp. xviii + 255.

Reviewed by SOL L. GARFIELD

Dr. Watkins, the author, is Chief Clinical Psychologist in the Veterans' Hospital in Portland, Oregon, work in which he has been engaged for the last ten years. Before that he taught in Washington State College. He has long been interested in psychotherapy and especially in hypnoanalysis, and he is the author of *Hypnotherapy of War Neuroses* (Ronald Press, 1949). Dr. Garfield, the reviewer, is Professor of Medical Psychology in the University of Nebraska's College of Medicine, and Chief of the Psychology Division of the Nebraska Psychiatric Institute. His many activities and appointments in clinical psychology—for the Veterans' Administration, for Northwestern University, for the University of Connecticut, and now for Nebraska—come near to winning him the title *Clinical Psychologist at Large*. He is the author of *Introductory Clinical Psychology* (Macmillan, 1957; CP, Apr. 1958, 3, 101f.).

IN this rather novel book, Dr. Watkins, an experienced therapist and well-known hypnotherapist, has attempted to provide the student of psychotherapy with a survey and overview of the field. Critical of training which serves to indoctrinate the student with one point of view, he believes "an extensive familiarization with other current approaches should provide a fertile soil in which the developing therapist can expand his own individual treatment skills." The author also believes that the book will be of value to experienced clinicians, teachers of psychotherapy, and persons preparing for specialty board examinations.

This volume is composed primarily of outlines and briefly annotated bibliographies. It is not a textbook, for there

is comparatively little text in it. The longest section of text consists of three pages on the definition of psychotherapy. All told, exclusive of outlines and bibliographic references, there are less than ten pages of written discourse. Thus, it is not a book one really 'reads.'

It is divided into five main parts of which two—*Theories and Techniques of Psychotherapy* (96 pages) and *Specific Therapeutic Problems* (79 pages)—make up the great part of its 215 pages. In contrast, Part V, *Evaluation and Research in Psychotherapy*, consists of just over three pages.

While I react favorably to the author's general objective, I have some reservations about how well the book fulfills its purpose. The various topics are treated unequally, and not necessarily in proportion to their importance. For example, *Schicksal (Fate) Analysis* (Szondi) and *Reich's Character-analytic Vegetotherapy* receive three and a half pages together, whereas *Relationship Therapy* and *Client-centered Therapy* are held to merit a total of only two pages. With one exception, the various outlines also do not follow a similar plan of organization. Some topics are covered in detail, others superficially. In Part III, *Preparations for Psychotherapy*, almost two pages of outline are devoted to the social history, but only six lines to psychiatric and medical examinations.

BECAUSE of the brevity and possible cryptic nature of many of the outlines, I am doubtful as to their value or meaningfulness for the student. A somewhat similar criticism can be made of the annotated bibliographies, where some of the annotations are very brief, e.g.,

"Written by an outstanding child analyst." Some psychologists may also note the lack of critical appraisal of the various approaches and references listed. Most appraisals of diagnostic testing, for example, are absent from the reference list on *Therapeutic Indicators from Psychological Tests*. Dr. Watkins' desire to concentrate on books and to omit most references to journal publications limits the value of the book as a comprehensive reference source for the teacher or investigator.

In spite of these criticisms, the book has good features. Watkins covers a wide territory. Twenty-eight types of supportive therapies and 24 major "re-constructive" therapies are listed, with 13 variations included under modifications of psychoanalytic therapy. While the outline portrayal of endless varieties of psychotherapy may possibly confuse the student, it may also impress him with the fact that there is more than one school of thought. The section on *Specific Therapeutic Problems*, in particular, seemed to this reviewer to be of some value for students. Although based on psychiatric nomenclature, the organization of this section helps the reader to focus on the different problems and approaches that should be considered with different types of psychopathology. In contrast to other sections of the book, this part utilizes the same major categories for each section: *Symptoms, Problems of Diagnostic Evaluation, Etiology, Prognosis, Treatment Procedures, and Case Examples*. The student can thus refer to the appropriate references when he is interested in therapeutic problems in a given type of case.

In closing, it is only fair to point out the divergence between the reviewer's somewhat critical appraisal of the book and the evaluation offered by Dr. Lewis R. Wolberg in the introduction, e.g., "Dr. Watkins' present volume is one of the most significant contributions to appear in the field of psychotherapy." While the goal of surveying the variety of approaches to psychotherapy is a laudable one, the present attempt appears too sketchy and uneven, even though it probably includes references to more different points of view than are to be found elsewhere.

"This is an excellent reading source. It differs from other 'readings' in that the source material is of a sort that would appeal to and recruit serious students of psychology."

MORTON RABIN
ASSISTANT PROFESSOR OF PSYCHOLOGY
MISSISSIPPI SOUTHERN COLLEGE

Contemporary Readings in General Psychology

Edited by Robert S. Daniel, University of Missouri

For the beginning student of psychology, a carefully tested selection of modern and appropriate readings from a wide variety of sources. The selections, for the most part by scholars who are well known for their research contributions, offer answers that masters of modern psychology give to the insistent problems of the field, yet never become too technical for the first-year student. Authors include James Bryant Conant, B. F. Skinner, Arnold Gesell, Norman L. Munn, Norman R. F. Maier, M. F. Ashley Montagu, Carl R. Rogers, Fredric Wertham, and many others.

385 pages

1959

Paper Covers

\$3.50

"This book with its primary emphasis on the social and psychological factors in adjustment seems particularly well suited to the 'typical' student in introductory psychology who is trying to gain an understanding of himself and the people around him. He will not be disappointed in his search for information herein."

LEWIS R. AIKEN, JR.
ASSOCIATE PROFESSOR OF PSYCHOLOGY
ATLANTIC CHRISTIAN COLLEGE (N. C.)

Psychology in Theory and Practice

By Thomas A. Ringness, University of Wisconsin
Herbert J. Klausmeier, University of Wisconsin
Arthur J. Singer, Jr., San Diego State College

This introductory text actively involves the student with the established principles of scientific psychology and helps him relate them to his own experience. Organization is in four parts: Psychology and (1) Student Life, (2) the Individual, (3) Society, and (4) Your Future. A Student's Manual and an Instructor's Manual are available.

480 pages

1959

\$6.00

Student's Manual, 144 pages, \$1.50

The Instructor's Manual is available without charge to teachers who adopt the text.

HOUGHTON MIFFLIN COMPANY

Boston

New York

Atlanta

Geneva

Dallas

Palo Alto

Exhausting the Water-Jar Problem

Abraham S. Luchins and Edith Hirsch Luchins

Rigidity of Behavior: A Variational Approach to the Effect of Einstellung. Eugene: University of Oregon Books, 1959. Pp. xxvi + 623. \$10.00.

Reviewed by W. EDGAR VINACKE

The authors are a husband-and-wife team who have published research together, as well as a VA manual called *An Examination for Rigidity of Behavior*. A. S. Luchins was the author of *Mechanization in Problem Solving* (Psychol. Monogr., 1942, 64, no. 6). Both A. S. and E. H. have taught at McGill University and the University of Oregon. Now he is Professor of Psychology at the University of Miami in Florida, where she is Research Associate in Mathematics. Dr. Vinacke, the reviewer, is Professor of Psychology at the University of Hawaii and the author of the well-known *The Psychology of Thinking* (McGraw-Hill, 1952). He traces his interests in thinking and motivation to Carney Landis and R. S. Woodworth and later to Gardner Murphy. Recently the Guggenheim people have given him a fellowship to motivate him to think about thinking and motivation.

THIS enormously detailed book presents more than 20 years of research with a single technique. Collaborating with Professor and Mrs. Luchins have been a host of students in New York, Montreal, and Oregon. The project is now being continued at the University of Miami.

The book has two purposes: (1) to survey theories of rigidity and the issues raised thereby, and (2) to report the aforementioned research. Different considerations enter into one's evaluation of how these two objectives are fulfilled.

Sections that survey contributions by psychoanalysts, Goldstein, Werner, Lewin, and factor analysts are lucid, penetrating, and worth the time of anyone interested in human thinking. The same can be said for other theoretical discussions here and there, like those

pertaining to concrete and abstract processes, and to variability.

The authors make it amply clear that rigidity has no precise meaning, but covers a congeries of behavioral phenomena, with each theorist employing the term for his own definition. At the same time, the Luchinses sharply call attention to the many kinds of fixed or repetitive behavior that have been studied. It is a real service to bring this material together in so critical a fashion.

The Einstellung situation is chosen as a "special case" of rigidity, although it is not clear what, if any, relation it may have to what other theorists have called rigidity. In fact, the Luchinses employ their experiments as a basis for arguing that it is fruitful for research to start with some phenomenon, interesting in itself, and then merely to observe this phenomenon under all possible conditions. Theory is regarded by them as blinding the investigator to significant facts not encompassed by the theory. They suggest, therefore, that the current demand in psychology for the intimate linking of experiment and theory has serious faults.

There is a significant issue, here, one for every academic psychologist to ponder and discuss with his graduate students. Whether or not one may believe that research should represent an interplay of systematic observation and theoretical principle, rather than seeing these activities as different functions to be carried out by different people, one would concede to an investigator the prerogative to choose his own strategy.

How well does the Luchins's special case support their preference for sheer experimentation, with theory afterwards?

First, let it be said that the authors are very successful in demonstrating that one can subject the same phenomenon to innumerable variations. They are ingenious in devising these variations as well as admirably steadfast in adhering to their basic technique.

Next, it must be remarked that serious weaknesses mar the program as a whole.

The Luchins experiment involves the establishment of a set, or Einstellung, by administering a series of problems solvable by an indirect method. These are followed by "critical" problems in which either this same method or a more direct one will both work. At a strategic point an "extinction" problem occurs, for which only the direct method will work. Rigidity is defined by the persistence of the initial method, or by failure to solve the extinction problem. 'Water-jar' problems are those typically employed. Here the subject is supposed to arrive at a specified quantity of fluid by filling or emptying jars, usually three.

The findings are easily summarized. Despite the vast number of studies reported, the Einstellung phenomenon is practically specific to the situation in which the set is induced—water-jar problems, or other closely related kinds of problems. Performance on the water-jar problems is related to hardly any other measures of behavior and is not affected much by variations either



—University of Miami photograph by David Greenfield

EDITH H. LUCHINS and
ABRAHAM S. LUCHINS

within the task or in the conditions under which it is administered.

Some evidence, however, was found that appropriate training may promote shifting to the direct method.

The weaknesses are of two major kinds. In the first place, the authors have paid little attention to conventional requirements of psychological measures. They ignore reliability. They mention sampling considerations only in a short footnote (p. 110), from which it may be deduced that an unknown proportion of subjects is excluded from each study because they failed to meet the criterion of performance (necessary in order to infer that a set had been established). We never know how large this proportion is, nor how these people may differ from those included. The fact that the problems may be unduly difficult for the purposes of studying set is seemingly of little concern to the authors.

In the second place, the focus upon a situation where theory enters only secondarily, in accordance with the argument for a "phenomenon-centered variational orientation," strikingly reveals the value of theory, rather than the other way around. The necessity to utilize the same situation repeatedly tends to restrict the hypotheses to those arising in this situation itself. Just at those points when a theoretical derivation might lead in a productive direction, the Luchinses, one supposes, veer away, rather than abandon or change their technique. Their attempts to study transfer illustrate this point.

Furthermore, the authors largely ignore other investigations, not only those with other techniques, but also those with their own. The long bibliography contains only one or two references later than 1955, apart from a few unpublished works by students of the Luchinses, and even before that date only part of the research on Einstellung effects is cited.

The main part of this book, then, shows how a clever investigator, by sticking to his last, can find an amazing number of ways to conduct the same experiment. At the same time, it is evident that, in this instance, at least, the case for a strictly "variational approach" is not a very convincing one.

Yale Studies in Attitude and Communication, 3

"No one has investigated more persistently and systematically the problems of persuading people to change their opinions than Carl Hovland and his associates in the Yale Communication and Attitude Change Program. . . . This is a collaborative research of a high order."—*Contemporary Psychology*.

ATTITUDE ORGANIZATION AND CHANGE

by Milton J. Rosenberg, Carl I. Hovland,
William J. McGuire, Robert P. Abelson,
Jack W. Brehm

The process of attitude modification has been studied by the members of the Yale Communication and Attitude Change Program through systematic investigation of a number of different variables. Previous volumes in this series have focused on the organization of change-inducing communications and on the personality characteristics of individuals who are exposed to them. In this volume the conceptual focus shifts to the organization of the attitude itself; to the relationships between its affective, cognitive, and behavioral components.

The guiding proposition underlying this work is that the separate components of an attitude tend toward consistent organization with one another. Attitude change characteristically occurs in response to forces or experiences that disrupt consistency through the modification of one or more of the components.

Each of the research studies attempts, through manipulative experimental procedures, to test and extend a separate theoretical approach to this basic process and to the factors which influence its operation. The final chapter, summarizes the major findings and, through an examination of certain unresolved theoretical problems, attempts to draw together the various approaches presented in earlier chapters.

\$5.00

Volume 1

THE ORDER OF PRESENTATION IN PERSUASION

by Hovland, Mandell, Campbell, Brock, Luchins, Cohen, McGuire, Janis, Feierabend, and Anderson.

\$4.00

Volume 2

PERSONALITY AND PERSUASIBILITY

by Janis, Hovland, Field, Linton, Graham, Cohen, Rife, Abelson, Lesser, and King.

\$5.00

* A new Yale Paperbound

FRUSTRATION AND AGGRESSION

by Dollard, Doob, Miller, Mowrer, and Sears

\$1.25

Yale University Press



New Haven, Connecticut

Do Words Do More than Help Themselves?

A. R. Luria and F. Ia. Yudovich

Speech and the Development of Mental Processes in the Child. (Ed. by Joan Simon; trans. by O. Kovasc and J. Simon; introduction by O. L. Zangwill.) London: Staples Press, 1959. Pp. 126.

Reviewed by SUSAN M. ERVIN

Dr. Ervin is Assistant Professor in the Speech Department of the University of California at Berkeley and also Research Associate in its Institute of Human Development. She has her PhD from the University of Michigan and has been studying linguistics and working experimentally on children's logic for some years. Just now she is working on language development and also on bilinguals.

THIS twin-control study, reported for the first time though the data were collected some years ago, gives one a distinct feeling of *déjà vu*—perhaps due to the small sample, the twins, the looseness of experimental controls, perhaps due even to the problem itself. We are, however, coming again to a concern with children's intellectual development and it would be wise for us to re-examine the unique aspects of the Soviet point of view.

The senior author of the monograph is noted for his work on aphasia and on mental retardation. He was once associated with L. S. Vigotsky and is now chief psychologist at the Institute of Defectology of the Soviet's Academy of Educational Sciences. He is also a member of the Department of Psychology of Moscow University.

Critical of Piaget's maturational interpretation of language development, Vigotsky thirty years ago offered a substitute. Not merely more environmental, Vigotsky's view was also more functional than Piaget's, and he saw behavioral changes as a consequence of the changing role of language in play and in adaptive behavior. Since that time, So-

viet psychologists have investigated the "second signal system," language, and have explored the relation between simple learning and language-mediated learning. Much of this research has been conducted in a school setting, but in some respects it converges on the recent American work on verbal mediation and predifferentiation.

Although a great deal of Soviet research on this problem is rigorously experimental, here the authors relax their control a little. They argue that implicit verbalization can be better controlled in children at different stages in language development. They found two uniovular twins with retarded speech, aged five, and placed them for observation in a residential nursery school. The twins were then separated from each other for ten months, and one was given training in naming objects, describing pictures, and answering questions. Both showed dramatic changes within three months in speech, language functioning, comprehension, play, and tested intellectual performance.

The authors hoped to sustain a thesis that language acquisition alters perception, mediates problem-solving, and promotes self-regulation of behavior. There is certainly an impressive demonstration of large changes accompanying the learning of language, and a strong implication that performance tests of intelligence may be sensitive to verbal training. Certainly there is clear support for the contention that group differences in intelligence-test scores are meaningless if either group has impoverished verbal training.

But just what are the changes that

occur, and how are they brought about? The language changes are given here only illustratively. One could wish, with twin speech so rarely described, that we had more facts. More important is it that we are not shown clearly any instances where language skill is crucial to a nonlanguage performance. The trained child differed in that he talked more, had better grammatical control, more extended sentences, better grammatical comprehension, and spoke more often about distant situations. Except for the sorting task, in which he more frequently used a consistent abstract category, the intellectual tests all required verbal output, so that he would necessarily have an advantage in performance. Only the sorting is really central to the thesis, and the examples given are not completely convincing of difference.

A COGNITIVE effect of language might arise for a number of reasons, and chief among these would be perceptual training and verbal mediation. The acquisition of referential labels and grammatical signals should force certain discriminations and discourage others. This change takes place during the learning of a language, but it does not require a verbal response at the time of testing. R. W. Brown and E. H. Lenneberg's research on color terminology (1954) neatly illustrates the second form of influence, for the learning of color names does not alter color perception but does influence the delayed recognition of colors, presumably by altering the probability of mediating responses.

Though these authors set out to show that language learning itself produces gross changes in cognition, they did not succeed in isolating the necessary changes. The effects on the control child in the study could be due to non-linguistic training with new toys and new games as well as to verbal development; the effects on the trained child were tested primarily with verbal tests rather than with purely cognitive performances. For those who do not realize that raw speech skill is involved in the usual intelligence test item, the results may be startling; but the core problem that the experimenters posed is still with us.

For your consideration— books from McGraw-Hill . . .

THE MOTIVATION OF BEHAVIOR

By JUDSON S. BROWN, University of Florida. McGraw-Hill Series in Psychology. Off press in January 1961.

The chief emphasis of this carefully developed analysis of motivation is on the utility of the motivation concept as an explanatory component of general behavior theory. The Hullian conception of drive is emphasized, with an examination of alternative theoretical interpretations. Included are studies of animal motivation and a survey of research on human motivation. This text is interesting and intelligible for both advanced and beginning graduate students.

ADJUSTMENT AND PERSONALITY

By RICHARD S. LAZARUS, University of California. McGraw-Hill Series in Psychology, 480 pages, \$6.50.

This text provides thorough coverage of the basic issues and points of view in the psychology of adjustment. This book, viewing the process of adjustment as an inseparable component of personality, is written at a high level of scholarship and will prove stimulating and valuable over a wide range of undergraduate courses for majors in psychology, as well as non-majors whose interest extends beyond the introductory level.

QUANTITATIVE METHODS IN PSY- CHOLOGY

By DON LEWIS, State University of Iowa. McGraw-Hill Series in Psychology. 558 pages, \$9.50.

A text for the "Quantitative Methods" or "Quantitative Analysis" psychology courses. It is concerned with the application of nonstatistical, mathematical and graphical techniques to the clarification and interpretation of experimental data. The aim of the book is to provide a comprehensive survey of the quantitative and statistical procedures basic to the utilization of mathematical functions in describing empirical relationships and in developing theoretical schema for behavior.

PSYCHOLOGY OF HUMAN DEVELOPMENT

By JUSTIN PIKUNAS and EUGENE J. ALBRECHT, University of Detroit. Ready in January, 1961.

A textbook for undergraduate courses in developmental psychology covering the entire life span from prenatal growth to senescence. The stress is on the continuity of human life; each age level is seen in the light of past development and as a preparation for successive levels. Emphasis throughout is on the "self" and the development of the "self-concept."

PSYCHOLOGY OF PERSONALITY, Third Edition

By ROSS STAGNER, Wayne State University. Ready in January, 1961

The third edition of an excellent text designed to provide the student with an introduction to current knowledge of the normal personality. Emphasis is placed on the author's conception of personality development and organization, built around homeostasis and the process of perceiving. Alternative formulations are discussed. Topics include: attitudes and values, the family, the school system, class and economic factors, personality and social values, emotional foundations, etc.

PERSONALITY ADJUSTMENT

By HENRY CLAY SMITH, Michigan State University of Agriculture and Applied Science. Off press in January.

Designed to present a clear, comprehensive and new view of the science of personality, this introductory college text provides a detailed, factual examination of the personal and social problems within a tightly knit organization. The four major sections of this study are oriented toward the trait, structural and adjustment views of personality, and the relevance of these points of view to the creation of a better society.

SEND FOR COPIES
ON APPROVAL



McGraw-Hill BOOK COMPANY, INC.

330 West 42nd Street

New York 36, New York

Appraising Motivation

Gardner Lindzey (Ed.)

Assessment of Human Motives. New York: Rinehart, 1958. Pp. x + 273. \$5.00.

Reviewed by N. T. FEATHER

Dr. Lindzey, the editor and evaluator of this symposium, has taught at Harvard and Syracuse Universities and is now Professor of Psychology at the University of Minnesota. He was editor of the Handbook of Social Psychology (Addison-Wesley, 1954) and with C. S. Hall author of Theories of Personality (Wiley, 1957; CP, Aug. 1957, 2, 201f.). The reviewer, Dr. Feather, an Australian with a PhD from the University of Michigan, is just now back in his home continent at the University of New England, which is (of all places) in Armidale, Australia, where he will be continuing his researches in personality dynamics.

WITH the exception of the first chapter, this volume comprises a set of papers presented at Syracuse University during the Spring of 1957. The nine articles, each by a distinguished contributor to theory and research in human personality, provide a stimulating cross-section of thought concerning problems involved in the assessment of human motives.

The term 'assessment' is used by Lindzey to refer to measurement in the most permissive sense. The reader who expects to find detailed presentation of specialized and rigorous procedures, in the context of traditional test theory, will be disappointed by this book. It is not a compendium of personality tests. The papers say little about technical problems involved in the development of assessment devices, e.g., reliability and validity, or about the relative advantages and disadvantages of different techniques, e.g., self-report vs. projective methods. In this respect *Assessment of Human Motives* is in contrast to the recent set of papers on objective

approaches to personality assessment edited by B. M. Bass and I. A. Berg (CP, Mar. 1960, 5, 68). The permissive use of the term 'assessment' does, however, broaden the scope of the papers so that methods still in the formative stage of development can be explored. In this respect the reviewer found the articles by G. S. Klein, Roy Schafer and I. L. Janis of particular interest. Klein refers to procedures used for assessing cognitive attitudes and styles, Schafer considers ways of investigating the concept of regression in the service of the ego, and Janis offers a thoughtful discussion of the psychoanalytic interview as an observational method. Each of these papers shows a commendable attempt to develop assessment procedures within the framework of psychoanalytic theory. As Lindzey indicates in his excellent introductory chapter, this is a direction of research which is essential if the formal imprecision of psychoanalytic theory is to give way to increased clarification and specification.

In addition to the foregoing papers, the volume contains articles by G. A. Kelly (personal constructs), Leon Festinger (cognitive dissonance), Henry Murray (general problems in assessment of motives), R. B. Cattell (the dynamic calculus), and Gordon Allport (the problem of units). In his introductory chapter Lindzey argues that "theoretical advance is inextricably linked to procedural or measuremental developments," a position with which few would disagree. He also presents a succinct review of the separate articles and considers the various papers in relation to a number of highly pertinent questions which cover major issues in the assessment of human motives. Among these issues are the following: How impor-

tant are conscious as opposed to unconscious motives in understanding behavior? What is the relative importance of direct as opposed to indirect techniques for assessing human motives? In assessing human motives, how important is it to specify the situational context within which the motives operate? How necessary is knowledge of the past in the assessment of contemporary motivation? Without doubt these are fundamental and important issues in the theory and assessment of human motives. Lindzey's summary of each contributor's position with respect to the complete set of issues provides a valuable and effective way of indicating similarities and differences in the points of view presented.

IT appears to the reviewer, however, that one can ask questions which are even more basic. Such questions relate to the logical status of the motive concept. How is motive to be defined? What facts of behavior demand the use of the concept? What distinguishes motive from other concepts, e.g., those related to learning? How is the concept of motive integrated into the different theories of personality and behavior? The answers to these interrelated questions will certainly influence the approach to assessment which is adopted. Lindzey, in his introductory chapter, does not address himself to these central issues, although there is ample evidence that the different contributors are using the concept of motive in different ways. For example, Klein follows Hebb's earlier approach and considers drive in relation to the directedness, patterning, and timing of behavior. Janis emphasizes the need to study the interaction of situational events and predispositional variables (motives?). Cattell defines motive in terms of "strength of interest particularized regarding situation and goal."

Despite emphasis on the interrelation of theory and assessment the present book does not attempt to explicate differences among its contributors in the way in which they use the concept of motive and the effect of these differences on the research strategy they employ. It may happen, for example, that a theorist who conceives of motive as

a relatively stable disposition of personality, acquired early in life, will tend to use different assessment procedures than one who considers motive as a more transient influence, perhaps tensional in nature. Similarly, we might expect a theorist who emphasizes unconscious motives to employ a different form of assessment (possibly more unstructured) than one who is more concerned with assessing conscious motives. Indeed, it would be a profitable exercise to examine the degree to which a theorist's conceptualization of motive influences his choice of assessment procedure. The reciprocal effect is also important. A more or less exclusive interest in a particular assessment device, e.g., the TAT, will no doubt color the way in which the theorist thinks about motive in general. This interrelationship between theoretical conceptualization of motive and the test procedure would be worth examining for each of the contributors in the present volume. It would help to make explicit both the way in which the theorist conceives of motive and the assumptions which he makes when he chooses to employ a particular assessment procedure, i.e., his theory about the test.

Two important strands of research activity are not represented in the present book. In the first place, papers in *Assessment of Human Motives* are oriented more towards the personality and clinical areas of psychology. There is no attempt to describe assessment procedures which are more related to the S-R theoretical conceptions of Hull and Spence. In particular, the reader will not find discussion of the Iowa (K. W. Spence, Janet A. Taylor) or Yale (George Mandler, S. B. Sarason) studies involving use of anxiety questionnaires. This research has been of particular value both in its relevance to basic issues in drive theory and in its general procedural approach using assessment devices in conjunction with a well-formulated theory.

Secondly, the reviewer believes that the present collection of articles would have been strengthened by the inclusion of at least one paper specifically concerned with detailed discussion of problems arising in the attempt to develop

test procedures for a single human motive. There is now an extensive literature concerned with assessment of the achievement motive and the relationship of differences in the strength of this motive to fantasy behavior, action, and social phenomena. The progress of this research provides an excellent example of the interplay of theory and assessment, with more recent emphasis on procedures for construct validation applied to the assessment techniques which are employed. The reader is referred to J. W. Atkinson's recent book for a coverage of this research (CP, Mar. 1960, 5, 65-68).

Despite these omissions the present collection of papers should serve as a useful introduction to the current thought

and research of several distinguished contributors to the area of personality dynamics. In this respect the set of articles should be particularly suitable for senior undergraduate and graduate students. The papers are not elementary. At the same time they do not presume a thorough acquaintance with the author's past contributions. In fact, some of them offer a handy summary of material the author has presented in previous and lengthier publications. There is a rich yield from their diversity. The serious student of human motivation will, however, want to dig more deeply, and he should also plan to cover a wider territory. These papers map out some of the profitable areas in which he can begin his spadework.

Will Suspenders Test School Readiness?

Wilfried Zeller

Konstitution und Entwicklung. Göttingen: Dr. C. J. Hogrefe, Verlag für Psychologie, 1957. Pp. 305. DM 26.00.

Reviewed by MARIA D. SIMON

Dr. Simon is now Assistant Professor of Psychiatry and a Clinical Psychologist in the Medical Center of the University of Arkansas. She was born in Vienna and worked in Anna Freud's wartime research nursery in London. Ten years later she had earned her PhD in psychology (with a minor in physical anthropology) at the University of Vienna and the next year she was graduated from the Vienna Psychoanalytic Institute. These days her chief interest is child development.

THE present work of Wilfried Zeller, a German school physician, is an account of his lifetime of service and research among the school children of Berlin. Although Zeller is recognized as an authority on child development in his own country, his name is practically unknown abroad. Since his most productive years were those between the mid-thirties and mid-fifties, when com-

munications between Germany and the outside world were almost extinct, none of his writings have been translated into foreign languages. Zeller, on his part, quotes almost exclusively from German authors, the best known of whom are Kretschmer and C. H. Stratz on physique and Hildegard Hetzer and Oswald Kroh on psychology.

Many theories have been advanced about the nature of human development as the dynamic interaction of maturational, constitutional, psychological, and environmental determinants. This developmental process is variously conceived as a gradual unfolding with progressive differentiation; as a repetition of essentially unchanging patterns, albeit on a higher plane; or as a process of narrowing down the range of attitudes, a more profound anchoring of responses, such as happens through imprinting, conditioning or learning. Zeller belongs to a school of thought that sees

development as a succession of distinct phases, clearly set off from one another in the course of individual maturation. At each stage the child's body shows characteristic external features and a typical body configuration; and the trained observer can get pertinent clues about a subject's mental and emotional stage of maturation from his physique. Critical periods occur at times when the individual is in transition from one phase to the next.

Zeller distinguishes the following developmental prototypes:

- (1) Early childhood, from birth to about 5 years of age
- (2) Transitional, 5 to 7 years
- (3) Middle childhood to about 9 in girls and 10½ in boys
- (4) Pre-pubertal inhibitory phase
- (5) First stage of puberty
- (6) Second stage of puberty
- (7) Maturity

To illustrate, the figure of early childhood is characterized primarily by an appearance of top-heaviness, with the head and trunk dominating the extremities; the trunk is relatively large and sack-like, with no apparent waist, and the abdomen protruding. By contrast, in middle childhood the head and trunk have markedly decreased in size relative to the extremities; the trunk is now cone-shaped, broad at the shoulders and narrow at the hips. The waist is clearly indicated. Fat has decreased and the body surface as well as lateral outlines are textured and shaped by increased muscle.

Figures that cannot easily be grouped with either of the foregoing extremes, because they exhibit mixed features, are assumed to be in a process of transition from the stage of early to middle childhood. Psychologically, the child with the transitional figure undergoes a period of instability, somewhat akin to the upheavals of puberty, and, as he approaches the configuration of middle childhood, settles down to a new equilibrium, commonly recognized as "school readiness." It should perhaps be stressed at this point that Zeller's concept of this "first transformation in body configuration" (in contrast to the "second transformation," i.e., puberty) as an indicator of school readiness has been widely adopted by German school psychologists and physicians.

Middle childhood, as a period of balanced growth and emotional stability (no doubt conceptually akin to Freud's latency period), gives way to the pre-pubertal in-



WILFRIED ZELLER

hibitory period with a slowing down in vertical growth and frequently a sharp increase in weight and pelvic girth, even in boys. This is followed by the growth spurt of the first pubertal phase, which, similar to the growth in the immediate pre-school period, mainly affects the extremities and particularly their most distal parts. The first pubertal phase ends with the menarche in girls and the production of live semen in boys; it coincides with the point in time when the extremities have reached their greatest size in relation to trunk size. From the turning point onward, during the second pubertal phase, growth is mainly confined to the trunk, and gradually the balanced appearance of the mature body is achieved.

In the mental field, Zeller holds that "work readiness" (analogous to the concept of "school readiness") is reached only during the second phase of puberty. This point, though interesting, is probably of more practical relevance in Europe, where most young people leave school and enter the labor market at 14, than it is in the United States.

ZELLER bases his views on normal and abnormal development mainly on endocrine factors. For instance, the periods of somatic and psychic developmental imbalance in both the kindergarten and first puberty stage are caused by increased activity of the growth hormone of the pre-hypophysis. In analogous manner Zeller sees deviant development caused primarily by abnormal endocrine functioning. He notes eight prevalent deviant developmental types, relating to individuals where the timing and intensity of developmental hor-

monal changes are more or less off schedule; depending on the degree of the aberration, these will range from healthy variants to pathological forms.

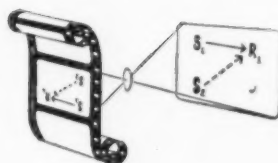
Description of these variants is of particular interest in that the author tries to relate the developmental types to Kretschmer's adult constitutional types. He makes the point that there is no simple relationship between childhood and adult physical constitution. The "hypopituitary" type, for instance, is the well-known "fatty" of middle childhood. The onset of pubertal growth and maturation is usually delayed, but once the child begins to catch up he typically achieves a quite virile physique. While a fair number of these types will in later life revert to the pyknic body-build, many such persons achieve an athletic or even leptosome constitution.

Another interesting facet of the work concerns the relationship of physical variants to mental characteristics. Zeller finds, for instance, that the "interrenal" type, where adrenal cortical functioning is precocious and gonadal impulses are relatively weak, results in young people of aggressive personalities, prone to affective discharges and delinquent acts. Physically, these youngsters are of medium height, dolichocephalic, dark-complexioned, and of slender build. One wonders what to make of these findings in the light of other studies on delinquents' physique, such as the one by Sheldon and Eleanor Glueck, who found that 80% of their sample of delinquent youth were mesomorphs, i.e., athletic figure types.

The main fascination of this book stems from Zeller's Teutonic penchant for an all-embracing theory (or is it a philosophy?) of development. While it may be possible to disprove him on details or to berate the book for lack of sufficient documentation, it would be hard to deny that he has done much worthwhile work and has provided us with a variety of intriguing hypotheses. As the reader lays the book aside he may wonder why he had not noticed before that Johnny did not learn to read until his pants stayed up without suspenders, or that Bill was a terrible paper-boy until his feet got so big he could wear Dad's shoes.

INSTRUCTIONAL MEDIA

Edited by A. A. Lumsdaine



ANNIVERSARY

ONE year ago, this department added teaching machines and self-instructional programs to the set of instructional media to be reviewed in *CP*. This broadening of scope, a departure from a review section formerly devoted solely to films (including TV kinescopes) and research on these media, has been somewhat hampered thus far by a dearth of self-instructional (or auto-instructional) programs suitable for review in these pages. The situation has, however, been improving. A year ago, in the January 1960 issue of *CP*, it was possible for Robert Glaser to maintain accurately, in the course of reviewing papers by Pressey, Skinner, and Ramo, that, "at the present time, machines outnumber programs by a large factor." "We are," he said, "in the situation of having shells without innards." Glaser's review has subsequently been reprinted in the just-published volume, *Teaching Machines and Programmed Learning: A Source Book* (A. A. Lumsdaine and R. Glaser, Eds.; the National Education Association, 1201 Sixteenth Street, N.W., Washington 6, D. C.; pp. 724 + xii; \$7.50), along with most of the basic literature to appear thus far in the auto-instructional field. Even more than by the publication of a comprehensive source book, the maturing of this growing field is evidenced by the fact that, one year after Glaser's commentary on the program lacuna, a goodly number of programs for teaching machines are becoming available, and that several of them are or soon will be for sale in fields of interest to psychologists, affording grist for several forthcoming reviews in this department.

These reviews of auto-instructional (teaching-machine) programs will be of interest to psychologists both because of the instructional techniques they em-

ploy—especially, perhaps, in instances where these techniques derive their rationale in part from laboratory studies of learning—and, in most instances, also because of their subject matter. (With few exceptions, the programs to be reviewed provide media for self-instruction in subject matter which psychologists and graduate students in psychology are called upon to master.)

Lewis Eigen's review of Norman Crowder's self-instructional text on computer arithmetic is concerned with the first of a considerable number of programs in mathematical subjects that have been written during the past year or so (most of them in Skinnerian rather than Crowderian form), it is the first published program to be reviewed in *CP*. Among the reviews of other (mostly Skinner-type) programs which are scheduled to appear in early issues of *CP* are Eugene Galanter's and Irving Saltzman's reviews of two programs in statistics by L. E. Homme et al. (Teaching Machines, Inc.); Susan Meyer Markle's review of a program in English grammar and composition (Harcourt Brace); and Loche Van Atta's review of the widely used program in the science of behavior by J. G. Holland and B. F. Skinner. The availability of these and other programs of special interest to psychologists, together with a large and rapidly growing number of other programs in subjects spanning the curricula from elementary school to college levels (e.g., spelling, music, algebra, languages), may be taken to mean that the technology of programmed learning is, if not yet fully of age, at least entering upon a fast-growing period of vigorous adolescence.

Evidencing this department's policy of continuing to provide a more or less balanced diet including an admixture of reviews on the somewhat more vener-

able classroom aids represented by films, as well as reviews dealing with auto-instructional methods and materials, *INSTRUCTIONAL MEDIA* in this issue complements its first auto-instructional program review, Crowder by Eigen, with a review by Frank Beach of Harry Harlow's new film based on the work earlier reported by Harlow in his presidential address before the APA in 1958, *The Nature of Love*.—A. A. L.

Scrambled Bits

Norman A. Crowder

The Arithmetic of Computers.
New York: Doubleday, 1960. Pp. 480. \$3.95.

Reviewed by LEWIS D. EIGEN

who is Mathematics and Science Director of the Automated Teaching Project at the Collegiate School in New York City. With a BA in mathematics from Brown; an MA from Teachers College, Columbia, and a professional diploma as a supervisor of secondary mathematics, Eigen has taught secondary mathematics at Collegiate for the past two years and has served as mathematics consultant to several other schools. His major passion is research and development for programmed instruction designed to improve the quality of American education. He is the author of an extensive auto-instructional program (modified Skinner style), Sets, Relations, and Function.

IN the field of automated teaching, many researchers have been interested in the problem of teaching-machine simulation. One simulator which has been devised is the so-called *scrambled textbook* which Crowder and his Western Design associates call a *Tutor Text*. *The Arithmetic of Computers* is such a Tutor Text. Theoretically a student with the aid of this Tutor Text should be able to learn the arithmetic of computers. After the student has read an introduction explaining the use of the book, he begins on page 1 and reads some expository material. At the bottom of the page there is a question and several multiple-choice alternative

answers. Next to each alternative answer is a page number which the student is directed to read if he chooses that particular answer. If he has chosen the correct answer, the beginning of the page to which he has been directed will tell him that his answer was correct and provide virtually immediate reinforcement for the correct response. The student is then provided with more expository material and another question with a set of alternatives and alternative pages. In this way he proceeds through the entire program. If the answer be incorrect, the text on the page to which he has been directed will explain his error and ask him to "try again."

The scrambled method of programming, and thus the Tutor Text, has several advantages over other types of programming. Tracking or branching is very easily accomplished with a scrambled program, for the learner can be directed to a particular section if he does not respond correctly, whereas he can be directed to skip the section and to go on to new material if his response is correct. Also the programmer may compensate for different error types, a difficult feat with other types of programming. The Tutor Text is a virtually 'cheat-proof' simulator of a teaching machine. Other simulators, such as the Homme-Glaser type of programmed textbook, do not offer the same control.

On the other hand, the scrambled text presents several disadvantages. The fact that the overt response of the learner is the turning of several pages, accompanied by some sort of covert response, seems to indicate that a greater amount of transfer will be necessary when the learning is applied to useful situations than if the response had been overt and free as in Skinner-type programs. Since there are several alternative responses, it is entirely possible that an incorrect response may be strengthened in the repertoire of the student. Further, there is no guarantee that the student has mastered any particular section before he goes on to learn new material; it is possible that, not knowing the correct answer, he might guess and thence be directed to a new frame, whereas, in reality, he has not yet learned what he should.

Crowder and his associates (the writing was actually done by a team) have very skillfully attempted to minimize the disadvantages inherent in the Tutor Text. Several frames of the program have, as possible alternatives, "I don't understand this business" or some response of that nature, thus providing the student with a possible response that, if selected, will be reinforced by a re-explanation of the material. Also, a very skilful attempt has been made to shape up an incorrect response into a correct response by the explanation as to why the response was incorrect.

Although the authors have minimized the intrinsic disadvantages of the scrambled text, they have not completely capitalized on its intrinsic advantages. Even though the Tutor Text offers the possibility of very facile tracking or branching, the authors have failed to use this advantage. Since much of the material covered, especially in the first half of the program, might easily be included in an elementary algebra course in high school, it would seem that it would be extremely advantageous to insert several frames testing the mastery of these topics. If the student already had the prerequisite knowledge, he could skip entire sections of the text and go on to new material. If, on the other hand, he were not familiar with the topics, he could learn them by means of the program.

ESSENTIALLY, the *Arithmetic of Computers* presents a rather 'applied' approach to nondecimal arithmetic with particular emphasis on binary and octal arithmetic. Much of the content is elementary algebra which is prerequisite to the learning of the nondecimal arithmetic. The approach is 'applied' in that mathematical proofs and justifications are often omitted in this text. The programming of mathematical proofs for automated teaching devices is something which, as far as the reviewer knows, no one has yet accomplished. It may well be that this may provide a great challenge to programmers in the future.

Having adopted an 'applied' approach, the authors have included sections containing the application of the basic nondecimal arithmetic to an imaginary computer, "EXAC," a five-bit, binary, dig-

ital computer which, except for the limitation to only five bits, is typical of many digital computers in operation today. The operation of EXAC is treated in some detail, including overflow and algebraic sign. The value of the content of this program to the psychologist is questionable, for, even if he were interested in computers as a research tool, he would in all probability not program the computer in its basic arithmetic language; instead he would use one of the existing symbolic systems such as SOAP or FORTRAN.

The major interest of the psychologist in the *Arithmetic of Computers* would probably lie in its use as an experimental program. The content is not so inclusive or detailed that this text could be used to train a computer engineer. In the opinion of the reviewer, this text is probably most suitable in 'general education.' It seems excellent for use as enrichment material for high-school or junior high-school students.

The reviewer has tried this Tutor Text on two subjects, both of them high-school students. One seemed to have learned most of the important concepts; the other had some difficulty. Both had considerable difficulty in remembering terminology. This block may be due to the lack of constructed responses or to overly large step size. Both subjects complained of the excessive amount of page-turning that was required. While page-turning does not arouse serious complaint, it would nevertheless be a simple matter to write a computer program that optimizes a Tutor Text so that page-turning is minimized.

One feature of the *Arithmetic of Computers* to be noted by all who attempt to write the scrambled form of program is that each page of the text contains not only a page number but also, in parentheses, the page number of the page that immediately preceded it. This practice facilitates review and also helps the student to find his place at the beginning of each new session. Also, "self-test questions" are included at the end for the student's practice. Each question is accompanied by a page number, and, when the student turns to that page, he finds the answer to the

questions at the bottom below the usual text of the frame on the page.

The *Arithmetic of Computers* seems to represent an extremely thorough and competent job of programming subject matter. Just how good it is will, of course, depend on its success with students. Nevertheless, in the opinion of the reviewer, this program represents one of the best examples of scrambled programming that he has seen, and it is an excellent model for those who wish to emulate Mr. Crowder's technique.

Terry Cloth on Film

Nature and Development of Affection, by Harry F. Harlow

16 mm sound film. University Park, Penna. PCR-116K. Rental (black and white) \$4.25; (color) \$7.00. Purchase price (black and white) \$86.00; (color) \$172.00.

Reviewed by FRANK A. BEACH

who was curator and chairman of the Department of Animal Behavior at the American Museum of Natural History before he became a Yale professor in 1946, but moved his locus operandi from New Haven to Berkeley a couple of years ago. He is past president of the APA Division of Experimental Psychology, and in 1958 was chosen (as was Professor Harlow two years later) to receive an award from the American Psychological Association for distinguished scientific contributions in psychology based on his research on the determinants of sexual behavior and other contributions to comparative psychology.

IT is generally known that Professor H. F. Harlow and his associates at the University of Wisconsin have had under way for several years a program dealing with the development of behavior in young rhesus monkeys. As a standard practice, infants are separated from their mothers shortly after birth. Thereafter they are reared under a variety of experimental conditions which include the opportunity to associate with



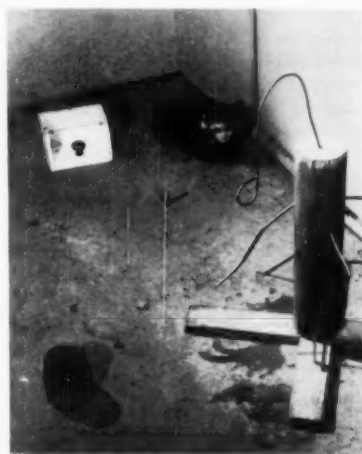
Terry-cloth mother surrogate provides 'security' for exploratory behavior

and form emotional attachment to one or another type of mother surrogate.

This film opens with a series of shots which demonstrate the congenital repertoire of reflexes available to the neonate rhesus. The repertoire includes all of the basic reactions necessary for the neonate's adaptive response to the natural or surrogate mother.

Some infants are housed with a surrogate constructed of wire screening. Others are confined with identical dummies except that the latter are covered with soft terry cloth (Fig. 1). In a free-choice situation baby monkeys demonstrate a clear-cut preference for the cloth-covered ('clutchable') dummy.

Some surrogates are equipped with a single, median-placed nipple which they can suck and obtain nourishment. Given a choice between a plain, wire 'mother' that provides milk, and a cloth-covered,



Emotional avoidance of strange objects when the mother surrogate is not present

nonnutritive 'mother,' infant monkeys choose the latter. However, if two cloth-covered 'mothers' are available, and only one can be suckled, the nutritive surrogate is preferred by infants until they are approximately a hundred days old.

After a period of association with a satisfactory surrogate mother, young monkeys apparently derive some reward from purely visual contact with her. At any rate, they will repeatedly perform an instrumental act (e.g., depressing a lever) which uncovers a window and permits them to see, but not to approach, the surrogate.

The bonds formed during association in infancy are surprisingly persistent. The film shows that monkeys reared with a dummy mother exhibit prompt, positive reactions to the surrogate after two years of separation.

The film demonstrates an ingenious test for the strength of 'affectional attachment'—a test based upon the assumption that fear or anxiety is reduced in the proximity of a stimulus object to which the subject is 'affectionately attached.' Very young monkeys are released in an open field containing a variety of fear-inducing objects such as moving, sound-producing, mechanical toys. The indications of emotional distress include vigorous avoidance of the novel objects and 'withdrawal' symptoms, including crouching, covering the head with the hands, etc. (Fig. 2). If the cloth-covered mother is present, the infant runs and clings to her, and eventually begins to explore the strange environment (Fig. 1). The presence of an uncovered, wire mother surrogate does not produce these evidences of 'security.'

The photographic technique is of professional quality. The color is good, though a black and white copy could be used effectively. The film should be used in conjunction with a lecture or commentary based upon careful and extensive reading of publications from the Wisconsin laboratory. Although the captions are helpful, they cannot adequately represent the full significance of the research program.



ON THE OTHER HAND



ABELSON ON WEISS ON ABELSON

If it were not for the helpfully unambiguous heading, *Feeble Science for Sale*, I might have had some difficulty in deciding what Walter Weiss thought of my book, *Persuasion* (CP, July 1960, 5, 214f.). Some of his comments, which might be construed as invidious if the book had been written for social scientists, could be interpreted otherwise considering who the intended audience actually are (public relations people as Weiss acknowledges, and other "practicing persuaders"). For example: "Practical utility is the guide for the selection of reported research. . . ." "What cannot fit the judged needs of communicators is omitted." "Sometimes when research is inconclusive or inconsistent, the author will offer his own suggestions on how the variables could be used in persuasion."

It is hard to understand Weiss' criticism of two points made in the preface, unless the points themselves were not well stated. One, that a finding derived from a study with a proper research design is not inviolate: "Under slightly different conditions the experiment might have turned out differently." Two, that the practicing communicator should regard research findings as a supplement to "his own experience, and not as a substitute for experience." These points are obviously intended to discourage the uninitiated from thinking that at last he is possessed of a handbook for successful manipulation.

Part of Weiss' last paragraph also puzzles me: "Throughout the reported studies are used uncritically. Nor does the varying quality of the research seem to be reflected in the author's remarks concerning the research." In fact, there are four instances in the first 15 pages of text which contain statements evaluating the research. In other places, when findings from reported studies are in conflict, an evaluative comment is often made about the research itself. Maybe the reviewer was preoccupied with the first few pages of the book, which might explain his impression that there were no comments about the quality of the reported research.

Over half the space in the CP review is devoted to the preface, which runs for one

and one-third pages. With all due modesty, I certainly would have welcomed and your readers might have been better served by Weiss' evaluation of my thoughts on the ethical considerations involved in the application of opinion change research, or speculations on the changing roles of communicator and audience, or at least his comments on some of the generalizations from opinion change studies which are provided for the practicing communicator. Weiss almost certainly has a point of view on a larger problem, suggested by the very existence of a book such as this one: the accelerated application of research findings for purposes irrelevant to the researcher's immediate objectives and possibly antithetical to his values. I wish he had expressed it.

HERBERT I. ABELSON
Opinion Research Corporation
Princeton, New Jersey

BODY IMAGE AND PERSONALITY

In a reply to Sarnoff Mednick's review of our book (*Body Image and Personality*, CP, Sept. 1959, 4, 276f.) we indicated that he had been in error in four respects: his overstatement of the number of Rorschach variables significantly correlated with the Barrier score; his faith (unjustified by the existing literature) that Rorschach variables like W & M can predict the same sorts of phenomena that the Barrier score has been able to predict; his miscount of the number of instances in which we had cited the ranges of scores in our subject groups; and his misinterpretation of the direction of our rounding-off procedures in assigning significance levels to chi-square values (CP, Mar. 1960, 5, 109). He has recently chosen to respond to our comments in a manner which ignores our criticisms (CP, Sept. 1960, 5, 316f.). We suppose he did not deal with these criticisms because he could not refute them.

Thus, ignoring the errors in his original review, he has introduced a new line of attack upon our work. Apparently he recalculated all of the chi-square values in 16 of our tables and, on the basis of these findings, says that our tables were full of gross errors. His over-all conclusion was

that 7% of our calculations were probably in error. We have carefully reviewed the data which he mentions and wish to present a somewhat different picture. While Mednick refers broadly to the presence of many errors in various tables, he has actually presented detailed criticisms of only one table, viz. 8:2. With regard to this table he pointed out that one chi square listed as 8.8 should actually be 3.96 and another listed as 5.2 should be 11.32. We re-evaluated this table and discovered that the original chi-squares we had listed are correct, but that due to a typographical error two values (53 and 65), reporting the percentages of cases above the group median, had been interchanged in position. We also investigated the other "serious errors" to which Mednick referred and found that in table 8:1 two chi squares (Neurotics vs. Undifferentiated Schizophrenics, and Neurotics vs. Paranoids) had been interchanged in position (not miscalculated) because of a typographical error. Further in Table 10:2 we discovered that a percentage value listed as 31 should have been listed as 25, but the chi-square value for the groups being compared was correct as stated in our table. We agree that in several instances we committed the error of citing values at the .02 level when they should have been listed as being at the .05-.02 level. In another instance we erroneously cited a chi square of 6.1 as being significant at the .01 level when a value of 6.635 is actually needed. All of the other 'formidable' errors attributed to us by Mednick boil down to differences of the order of .1 to .3, which can be easily accounted for in terms of rounding off values in the process of computing. It is our position that no serious computational errors were made. None of the errors cited was of sufficient magnitude to change basic matters of fact or interpretation. No error was such as to change given results from significant to nonsignificant levels or vice versa.

Mednick, concerned with pointing out minute errors and deviations in our data, adopts a less rigorous standard toward his own computations. He says that he found errors in 9 of 16 tables which he examined and concluded that 7% of our work must be in error. He overlooked, however, the very obvious fact that the tables he examined vary widely in the number of results they present and that a more logical base for computing degree of error is the total number of items presented in the 16 tables. If one uses such a base, it turns out that there are no more than three or four insignificant computational errors out of a grand total of 81 separate chi squares. We



An Introduction to the Theory of Experimental Design

by D. J. Finney. A book for the mathematician, statistician, and mathematically orientated scientist. In emphasizing that the success of an experiment depends primarily on the choice of design, this manual offers a comprehensive survey of the principles, problems, and both classical and newly discovered techniques of experimental design. 232 pages, index. 1960. \$7.00

Experimental Design and Its Statistical Basis

by D. J. Finney. This volume introduces experimental design as it pertains to biological research—with methods by which the experimenter can select and construct designs for particular objectives. 169 pages, tables and figures. 1955. 2d printing now ready. \$4.50

Modern Factor Analysis

by Harry H. Harman. Designed to serve the interests of graduate students and researchers in psychology, statistics, and related disciplines, this study presents an accurate, up-to-date account of factor analysis from its basic foundations through the latest and most advanced methods, including the use of high-speed electronic computers. 480 pages, index. 1960. \$10.00

The Structural Basis of Behavior

by J. A. Deutsch. This original study proposes a theory of behavior to explain some of the experimental evidence amassed by psychologists in the fields of motivation, learning, reasoning, and perception. 176 pages, index. 1960. \$3.50

International Encyclopedia of Unified Science Vol. I in two parts

Edited by Otto Neurath, Rudolf Carnap, and Charles Morris. These superb volumes, containing essays by such physicists as Niels Bohr, Victor Lenzen, and Philipp Frank; and philosophers such as Dewey, Carnap, and Bertrand Russell; also offer contributions in mathematics, psychology, cosmology, and sociology. The encyclopedia has as its goal a unity of the sciences in common areas of activity such as observation and experimentation. Vol. I in two parts, 760 pages. \$11.00

UNIVERSITY OF CHICAGO PRESS
5750 Ellis Avenue, Chicago 37, Illinois

feel that this degree of error does not exceed that inevitably involved in any large-scale analysis of data.

Our final point is that, even if the validity of every error pointed out by Mednick was accepted, there would be no change in any basic conclusion or substantive matter that we have presented. Is a screen of detailed and pedantic criticism, which can be applied to any published work, an adequate substitute for considering what new perspectives and insights are offered by that work?

SEYMOUR FISHER
Baylor College of Medicine

SIDNEY E. CLEVELAND
Houston V. A. Hospital and
Baylor College of Medicine

After this, the fourth communication in this controversial tennis, CP will apply its rule of $r = 0.5$, no response may be more than half as long as its stimulus. Thus the 13th communication would be by Mednick and consist of one word, perhaps "No!" or perhaps "Well!"

STILL BELLAK

Bernard Saper's review of Bellak's *Schizophrenia* (CP, Mar. 1960, 5, 100f.) has, it appears, inspired a controversy which has led to the publication of two letters (both pro-Bellak) in ON THE OTHER HAND (Saul Scheidlinger, CP, July 1960, 5, 238; Leonard Small, CP, Aug. 1960, 5, 271). These letters imply that no self-respecting clinical psychologist dare criticize Dr. Bellak's behemoth volume. One of these letters expresses surprise that "CP editors would have chosen a little-known psychologist to review a book by a clinician of international repute." This is a rather odd statement which generally is better left to die of its own inanity. Yet it raises an issue which is becoming increasingly vexing in this age when both the public and the professional psychologist are confused by the proliferation of certificates, licenses, and board-approvals, current and clashing throughout the United States in identifying who may legitimately call himself a "psychologist." Just what pedigree does a psychologist need to have in contemporary American society in order to review a book in CP? Dr. Saper's associate editorship of *The Journal of Clinical Psychology*, his diploma in Clinical Psychology, and his directorship of Psychological Services in the New York State Department of Mental Hygiene must surely possess a certain merit as qualifications.

Focusing on Dr. Bellak's book itself, we find a huge, sprawling, uneven volume that

by no means merits or possesses the unrestrained praise of all clinical psychologists. Dr. Small describes the book as a "titan volume." It is titan, indeed, in size, but not in over-all achievement. Dr. Saper's review rightly attempts to separate the wheat from the chaff in this volume, in which, unquestionably, there are articles that shed a great deal of light on the murky problem of schizophrenia. On the other hand, there are chapters in this volume that would not meet graduate-school standards as a review of the literature. We have come to expect more from a review than an uncritical stringing together of summaries of research. Critical questions must be raised, research must be evaluated, findings must be intelligently integrated in any review worth its salt.

Drs. Scheidlinger and Small in their pro-Bellak, anti-Saper comments, seem to me to be in awe of the size of a volume and the fame of its editor. These qualities, let us remember, have no intrinsic worth nor do they render a volume unassailable. I doubt if CP printed Dr. Saper's review merely to generate a controversy. Therefore, I congratulate its editors for printing reviews that make even 'gods' justify their works. Long live brevity and clarity in expression! They lead not only to more pleasant, meaningful reading, but to lower book prices as well.

IRVING WEISS
Central Islip State Hospital

HOW TO IMPROVE CP

When Dr. Standel and I, some five years before the publication of *Critical Incidents in Psychotherapy*, began our task of preparing the book, we interviewed, together and singly, a number of eminent people in the fields of clinical psychology and psychiatry, to obtain opinions and suggestions. We found, much to our amazement, that a statement of our intentions elicited considerable emotionality. Several good people got quite worked up and berated us roundly, and in one case the writer was almost literally thrown out of an office.

Hathaway's review of our book in CP, with its intemperate and irrelevant remarks, did not totally surprise us therefore. What does bother us is that such an unfair review was published. The rebuttals of Drs. Ansbacher and Harper, defending our book, together with a number of expressions of colleagues in wonderment about the review, lead me to make several remarks intended to help in making CP a better journal of reviews.

(1) Reviewers should have two qualifications: they should be knowledgeable

about the topic and sympathetic to the intention. In the instant case, I do not know whether Hathaway was competent in terms of knowledge, but he certainly was unsympathetic to the idea of the book. In his review he seemed more concerned with *what* we did rather than *how* we did it.

I would, for example, decline to write a review of a book on ESP, the Szondi test, or psychoanalysis, partly because my unsympathetic attitudes to these topics would make me likely to prejudge the books.

(2) A grossly unfavorable review should be balanced by an independent opinion. I note that in the September 1960 issue under CP SPEAKS, the editor states: "There was an understanding with this . . . reviewer . . . if he found against Hogben, Stevens would publish a contrasting review." It would seem that a similar courtesy is due all writers, especially since it is possible that for many psychologists the reviews in CP remain their major source of information about the book in question.

An unfair review (contrasting it with an unfavorable review) may affect the reputations, and consequently the futures of individuals, and it is entirely possible that letters to the editor and other corrections may not entirely offset the original damage.

(3) I believe that the editor of CP should edit reviews, eliminating irrelevancies and *ad hominem* remarks. It is easy to write insulting remarks and to make indictments: it is much harder to write plain language in a sensible manner about important things. Gratuitous digs should be rooted out. This is an editor's duty.

(4) I do not know how reviewers are suggested, but I am inclined to think the following procedure would be workable. Divide the editorial consultants into committees in terms of APA divisions. Let any new book be examined by a member of the proper committee for *importance*, and then let the book be reviewed by a person cleared by this committee in terms of knowledge and sympathy.

RAYMOND J. CORSINI
Chicago, Illinois



In a nation of 70 million people, the exceptions to almost any generalization inevitably number in the hundreds of thousands. What is statistically true of even 98 out of 100 Americans must statistically exclude three or four million of them.

—THOMAS GRIFFITH

BOOKS RECEIVED

- ABRAHAMSEN, DAVID. *The psychology of crime*. New York: Columbia University Press, 1960. Pp. xiv + 358. \$6.00.
- ANDREAS, B. G. *Experimental psychology*. New York: John Wiley & Sons, 1960. Pp. xii + 595. \$6.95.
- APPLEBY, LAWRENCE, J. M. SCHER, & JOHN CUMMING. *Chronic schizophrenia*. Glencoe, Ill.: Free Press, 1960. Pp. xvi + 368. \$6.00.
- ASSOCIATION OF AMERICAN MEDICAL COLLEGES. *Admission requirements of American medical colleges, including Canada, 1960-61*. Evanston, Ill.: Association of American Medical Colleges, 1960. Pp. x + 241. \$2.00.
- BARBARA, D. A. (Ed.). *Psychological and psychiatric aspects of speech and hearing*. Springfield, Ill.: Charles C Thomas, 1960. Pp. xii + 756. \$10.50.
- BARNES, L. B. *Organizational systems and engineering groups: a comparative study of two technical groups in industry*. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1960. Pp. xvi + 190. \$3.50.
- BATTISTA, O. A. *Mental drugs: chemistry's challenge to psychotherapy*. Philadelphia: Chilton Company, 1960. Pp. xx + 155. \$3.95.
- BELL, N. W., & E. F. VOGEL (Eds.). *A modern introduction to the family*. Glencoe, Ill.: Free Press, 1960. Pp. xii + 691. \$7.50.
- BETTELHEIM, BRUNO. *The informed heart: autonomy in a mass age*. Glencoe, Ill.: Free Press, 1960. Pp. x + 309. \$5.00.
- BODA, FIGOR, & EVA ERDELY. *Követelmény, jutalom, büntetés: nevelési eljárások vizsgálata*. Budapest: Akadémiai Kiadó, 1959. Pp. 326. 45.-Fl.
- BOWER, E. M. *Early identification of emotionally handicapped children in school*. Springfield, Ill.: Charles C Thomas, 1960. Pp. xiv + 120. \$5.50.
- BROUHA, LUCIEN. *Physiology in industry: evaluation of industrial stresses by the physiological reactions of the worker*. New York: Pergamon Press, 1960. Pp. xii + 145. \$6.50.
- BRUNER, J. S. *The process of education*. Cambridge, Mass.: Harvard University Press, 1960. Pp. xx + 97. \$2.75.
- COLBY, K. M. *An introduction to psychoanalytic research*. New York: Basic Books, 1960. Pp. x + 117. \$3.00.
- FOUNDATION FOR RESEARCH ON HUMAN BEHAVIOR. *Voting research and the businessman in politics*. Ann Arbor, Mich.: Foundation for Research in Human Behavior, 1960. Pp. 39. \$3.00.
- GRAUMANN, C. F. *Grundlagen einer Phänomenologie und Psychologie der Perspektivität*. (Vol. 2 of *Phänomenologische-psychologische Forschungen*, ed. by C. F. Graumann & J. Linschoten.) Berlin: Walter de Gruyter, 1960. Pp. 194.
- HARMAN, H. H. *Modern factor analysis*. Chicago: University of Chicago Press, 1960. Pp. xvi + 469. \$10.00.
- HILTMANN, HILDEGARD. *Kompodium der psychodiagnostischen Tests*. Bern: Verlag Hans Huber, 1960. Pp. 252. DM 19.50.
- KAPLAN, MAX. *Leisure in America: a social inquiry*. New York: John Wiley & Sons, 1960. Pp. xii + 350. \$7.50.
- KEPHART, CALVIN. *Races of mankind: their origin and migration*. New York: Philosophical Library, 1960. Pp. xvi + 566. \$6.00.
- KOCH, HELEN L. *The relation of certain formal attributes of siblings to attitudes held toward each other and toward their parents*. (Monographs of the Society for Research in Child Development, Vol. 25, No. 4, Serial No. 78.) Lafayette, Ind.: Child Development Publications, Purdue University, 1960. Pp. 124. \$3.50.
- KREMERS, JOHAN. *Scientific psychology and naive psychology: an experimental investigation into the influence of the study of psychology on the practical knowledge of man*. Groningen: P. Noordhoff, 1960. Pp. 132. D fl. 9.50 (U. S. \$2.50).
- KRIEG, W. J. S. A. *A polychrome atlas of the brain stem*. Evanston, Ill.: Brain Books [1960]. Pp. 5 + plates A-K. \$3.00.
- MALINOWSKI, BRONISLAW. *A scientific theory of culture and other essays*. New York: Oxford University Press, 1960 (first published 1944 by University of North Carolina Press, Chapel Hill). Pp. x + 228. \$1.50.
- MARCSON, SIMON. *The scientist in American industry: some organizational determinants in manpower utilization*. Princeton, N. J.: Industrial Relations Section, Princeton University, 1960. Pp. x + 158. \$3.00.
- MCGUIGAN, F. J. *Experimental psychology: a methodological approach*. Englewood Cliffs, N. J.: Prentice-Hall, 1960. Pp. vi + 314. \$6.00.
- MCKEACHIE, WILBERT, with the collaboration of GREGORY KIMBLE. *Teaching tips: a guide-book for the beginning college teacher*. (4th ed.) Ann Arbor, Mich.: George Wahr, 1960. Pp. 194.
- MENDELSON, MYER. *Psychoanalytic concepts of depression*. Springfield, Ill.: Charles C Thomas, 1960. Pp. xii + 170. \$6.50.
- MOODIE, WILLIAM. *Hypnosis in treatment*. New York: Emerson Books, 1960. Pp. 168. \$4.00.
- MOWER, O. H. *Learning theory and the symbolic processes*. New York: John Wiley & Sons, 1960. Pp. xiv + 437. \$8.50.
- MURPHY, GARDNER, & R. O. BALLOU (Eds.). *William James on psychical research*. New York: Viking Press, 1960. Pp. viii + 339. \$6.00.
- PACKARD, VANCE. *The waste makers*. New York: David McKay, 1960. Pp. xii + 340. \$4.50.
- PURCELL, T. V. *Blue collar man: patterns of dual allegiance in industry*. Cambridge, Mass.: Harvard University Press, 1960. Pp. xviii + 300. \$6.00.
- RABIN, A. I., & MARY R. HAWORTH (Eds.). *Projective techniques with children*. New York: Grune & Stratton, 1960. Pp. xiv + 392. \$11.75.
- RAPOPORT, ANATOL. *Fights, games, and debates*. Ann Arbor: University of Michigan Press, 1960. Pp. xvi + 400. \$6.95.
- REINHARDT, J. M. *The murderous trial of Charles Starkweather*. Springfield, Ill.: Charles C Thomas, 1960. Pp. xiv + 151. \$5.75.
- REISS, I. L. *Premarital sexual standards in America*. Glencoe, Ill.: Free Press, 1960. Pp. 286. \$4.95.
- RICKERS-OVSJANKINA, MARIA A. (Ed.). *Rorschach psychology*. New York: John Wiley & Sons, 1960. Pp. xvi + 483. \$8.50.
- SCHER, S. C., & H. R. DAVIS (Eds.). *The out-patient treatment of schizophrenia: a symposium*. New York: Grune & Stratton, 1960. Pp. x + 246. \$5.75.
- SCHNECK, J. M. *A history of psychiatry*. Springfield, Ill.: Charles C Thomas, 1960. Pp. x + 196. \$5.50.
- SCHNEIDERS, A. A. *Personality development and adjustment in adolescence*. Milwaukee: Bruce Publishing Company, 1960. Pp. x + 473. \$5.75.
- SEARLES, H. F. *The nonhuman environment: in normal development and in schizophrenia*. New York: International Universities Press, 1960. Pp. xviii + 446. \$7.50.
- SEBEOK, T. A. (Ed.). *Style in language*. New York: John Wiley & Sons; Cambridge, Mass.: Technology Press, Massachusetts Institute of Technology, 1960. Pp. xviii + 470. \$9.50.
- SELMAN, MELVIN. *Social status and leadership: the case of the school executive*. Columbus: Bureau of Educational Research and Service, Ohio State University, 1960. Pp. xiv + 156. \$4.00 (cloth), \$3.00 (paper).
- SHERTZER, BRUCE (Ed.). *Working with superior students: theories and practices*. Chicago: Science Research Associates, 1960. Pp. xiv + 370.

- SIDMAN, MURRAY. *Tactics of scientific research: evaluating experimental data in psychology*. New York: Basic Books, 1960. Pp. x + 428. \$7.50.
- SOLLEY, C. M., & GARDNER MURPHY. *Development of the perceptual world*. New York: Basic Books, 1960. Pp. xiv + 353. \$6.50.
- SPENCE, K. W. *Behavior theory and learning: selected papers*. Englewood Cliffs, N. J.: Prentice-Hall, 1960. Pp. xii + 403. \$6.75.
- STACE, W. T. *Religion and the modern mind*. Philadelphia: J. B. Lippincott, 1960 (first published 1952). Pp. 320. \$1.95.
- STEIN, M. I., & SHIRLEY J. HEINZE. *Creativity and the individual: summaries of selected literature in psychology and psychiatry*. Glencoe, Ill.: Free Press, 1960. Pp. xii + 428. \$10.00.
- SULLENGER, T. E. *Neglected areas in family living*. Boston: Christopher Publishing House, 1960. Pp. 447. \$5.00.
- TEUBER, H.-L., W. S. BATTERSBY, & M. B. BENDER. *Visual field defects after penetrating missile wounds of the brain*. Cambridge, Mass.: Harvard University Press, for the Commonwealth Fund, 1960. Pp. xii + 143. \$4.75.
- TOMKINS, DOROTHY C. (Ed.). *In the interest of a child: a review of recent materials relating to the juvenile court in the United States*. Berkeley: Bureau of Public Administration, University of California, 1959. Pp. viii + 251.
- WHITE, R. K., & RONALD LIPPITT. *Autocracy and democracy: an experimental inquiry*. New York: Harper & Brothers, 1960. Pp. xii + 330. \$6.00.
- WHYTE, L. L. *The unconscious before Freud*. New York: Basic Books, 1960. Pp. xiv + 219. \$4.50.
- WILLNER, DOROTHY (Ed.). *Decisions, values and groups*. (Reports from the First Interdisciplinary Conference in the Behavioral Science Division, Air Force Office of Scientific Research, held at the University of New Mexico, 17 June-10 Aug. 1957.) New York: Pergamon Press, 1960. Pp. xxx + 348. \$12.50.
- WOLFF, P. H. *The developmental psychologies of Jean Piaget and psychoanalysis*. (Psychological Issues, Vol. II, No. 1, Monograph 5.) New York: International Universities Press, 1960. Pp. 181. \$3.00.
- WOOD, DOROTHY A. *Test construction: development and interpretation of achievement tests*. Columbus, Ohio: Charles E. Merrill Books, 1960. Pp. x + 134.
- WOOLSON, ARTHUR. *Good-by, my son*. New York: Harper & Brothers, 1960. Pp. xiv + 206. \$4.00.

SCHOOL PSYCHOLOGISTS AT MID-CENTURY

Edited by NORMA E. CUTTS

The Report of the Thayer Conference, published in 1955, covered an intensive study of the development of school psychology. Because of continuing demand, the Report has been reprinted.

230 pages

Price \$2.75



Order from:

AMERICAN PSYCHOLOGICAL ASSOCIATION

1333 Sixteenth Street, N. W.

Washington 6, D.C.

EUGENICS QUARTERLY

September, 1960

Vol. 7, No. 3

Contents

Premarital Pregnancy in the United States, THOMAS P. MONAHAN

Biologic Concepts of Sex and Reproduction, SHELDON J. SEGAL

A Quarter Century in the Natural Sciences, WARREN WEAVER

Periodical Reviews

Genetics, CHARLES M. WOOLF

Population, LEIGHTON VAN NORT

Book Reviews

EDITORIAL BOARD

Frederick Osborn, *Chairman*

C. Nash Herndon, M.D.

Frank Lorimer

Consulting Editors: JAN BÜÖK, M.D., F. CLARKE FRASER, M.D.

CLYDE V. KISER, LEIGHTON VAN NORT, L. D. SANGHVI, JEAN SUTTER, M.D.

Published by AMERICAN EUGENICS SOCIETY

230 Park Avenue, New York, N. Y.

Subscription \$5.00; membership \$5.00 (foreign \$2.50).

coming in February:

Psychology: A Problem-Solving Approach

by Donald M. Johnson. "He has certainly put into practice much better than any other general textbook writer with whom I am familiar, the general principles underlying learning and problem solving." Wayne H. Holtzman, *Hogg Foundation for Mental Health, University of Texas*. 570 pp. \$7.00

coming in March, watch for further announcement:

Learning and Human Abilities: Educational Psychology

by Herbert J. Klausmeier

just published:

Effective Study. Revised Edition

by Francis P. Robinson. 296 pp. \$4.50

Intelligence: Its Evolution and Forms

by Gaston Viaud. 128 pp. \$1.75 *

* Text Edition—available for quantity sale to schools and colleges only



Harper & Brothers,
49 E. 33d St., N. Y. 16, N. Y.

Publications of the AMERICAN PSYCHOLOGICAL ASSOCIATION

Subscription Rates for 1961

American Psychologist. Official papers of the Association and articles on psychology. Monthly. First issue appears in January. The 1961 volume is Vol. 16. Subscription: \$10.00 (Foreign \$10.50). Single copy \$1.00.

Contemporary Psychology. Critical reviews of books, films, and research material in the field of psychology. Monthly. First issue appears in January. The 1961 volume is Vol. 6. Subscription: \$10.00 (Foreign \$10.50). Single copy \$1.00.

Journal of Abnormal and Social Psychology. Original contributions in the field of abnormal and social psychology, and case reports. Bimonthly, two volumes per year. There are three issues in each volume. The issues appear in January, March, May, July, September, and November. The 1961 volumes are Vols. 62 and 63. Subscription: \$20.00 for 2 vols. (Foreign \$20.50). Single copy \$4.00.

Journal of Applied Psychology. Applications of psychology to business and industry. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 45. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Journal of Comparative and Physiological Psychology. Original contributions in the field of comparative and physiological psychology. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 54. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Journal of Consulting Psychology. Research in clinical psychology: psychological diagnosis, psychotherapy, personality, psychopathology. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 25. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Journal of Educational Psychology. Studies of learning and teaching; measurement of psychological development, psychology of school subjects, methods of instruction, school adjustment. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 52. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Journal of Experimental Psychology. Original contributions of an experimental character. Monthly, two volumes per year. There are six issues in each volume. First issue appears in January. The 1961 volumes are Vols. 61 and 62. Subscription: \$20.00 for 2 vols. (Foreign \$20.50). Single copy \$2.00.

Psychological Abstracts. Noncritical abstracts of the world's literature in psychology and related subjects. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 35. Subscription: \$20.00 (Foreign \$20.50). Single copy \$4.00.

Psychological Bulletin. Evaluative reviews of research literature, discussions of research methodology in psychology. Bimonthly. The issues appear in January, March, May, July, September, and November. The 1961 volume is Vol. 58. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Psychological Monographs: General and Applied. Longer researches and laboratory studies which appear as units. Published at irregular intervals during the calendar year — between 15 and 20 issues per year. The 1961 volume is Vol. 75. Subscription: \$10.00 (Foreign \$10.50). Single copy \$1.00 to \$3.00 according to size.

Psychological Review. Original contributions of a theoretical nature. Bimonthly. The issues appear in January, March, May, July, September, and November. The 1961 volume is Vol. 68. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Cover pages, table of contents, and index (when there is one) are contained in the last issue of the volume for each journal.

Discounts: AGENTS and BOOK DEALERS receive a 10% discount on all orders.

There is no club arrangement.

Note: There are no quantity, cash, library, or other special discounts.

► SUBSCRIPTIONS ARE AVAILABLE ON A JANUARY THROUGH DECEMBER BASIS ONLY ◄

Payment must be made in U.S. funds.

Send subscription orders to:

AMERICAN PSYCHOLOGICAL ASSOCIATION
Subscription Department
1333 Sixteenth Street, N.W.
Washington 6, D. C.

